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Laeis-Baldwin System of Practical Phonetics for Singers and Speakers

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Laeis-Baldwin System

of

Practical Phonetics

for Singers and Speakers

By Adèle Laeis Baldwin

Solo Contralto of the Marble Collegiate Church, New York City (1900-1921); Soloist with New York Oratorio Society; Handel and Hayden Society, Boston, Mass.; Seidl Orchestra; Bagby Concerts; St. Louis Choral; St. Louis Symphony Orchestra; etc.

Member of Faculty of the Institute of Musical Art, New York; the Finch School, New York; Diplomée of the Yersin Method

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COLLEAGUES OF THE CHOIR

OF THE

MARBLE COLLEGIATE CHURCH

NEW YORK CITY:

Mrs. Caroline Mihr Hardy, *Soprano*
Dr. Carl E. Dufft, *Barytone*
Mr. John Campbell, *Tenor*
Mr. Richard T. Percy, *Choir-Master and Organist*

Manuscript of Chapters 1 to 9 completed and in type in 1919.

INTRODUCTION

ANYONE whose fortune it has been to struggle with the incipient vocalist cannot fail to be impressed with the extraordinary difficulty the average student finds in understanding the actual implications of vocal art, and in dissociating for himself art problems of constructive expression from artisan problems of handling effectively his tool—i. e., his voice as an instrument.

It is the unique task of a singer to undertake the double duty of interpretation for both poet and composer. In responding to the thought of the poet the instinct is to assume that the organs of speech can be handled essentially as they always have been handled in talking during the years up to the moment of developing singing tone;—that, therefore, to acquire the enriched and unified sonority of a well developed voice is the only distinctively new aim of a singer's endeavor.

It comes to most students as a discovery that to combine the use of words with proper delivery of tone is often an excessively difficult thing. Because for long years the character of one's tone in speech has been vicious and this habit is ingrained, and because the rhythms and expansions of the song line distort ordinary speech values to such an extent, unexpected care is called for in every detail of vocal delivery. When once this discovery is made and the pupil sees clearly that all the charms of rich and pure tone are as naught so long as they are liable to be upset and caused to vanish in a crude endeavor to continue its flow beyond or around the obstructions of constantly changing vowels and consonants, then and only then is he really facing the technical problem of his instrument.

Although the interpretative goal must always be kept in sight it is exceedingly desirable that the student's eyes be opened very early to technical demands. Just here the wisdom of such careful and systematic induction of the pupil into the exact status of diction in vocal art as that given by Mrs. Baldwin becomes apparent. Not until one is conscious of every process and in command of every vocal resource can he be wholly free to pass at will from the artistic requirements of the ballad, where the poet drives with tight rein, to the open contours of coloratura, created and controlled wholly by the musician's fancy. For the greater part of vocal literature in which the exquisite courtesy of mutual concessions from both poet and composer lend the glamour of suggestion to each revealing moment the interplay of diction and of instrumental tone is constant and marvelous. Mastery of phonetic diction in its application to song is at once, then, a vindication of the high value placed upon that combination of speech and music known as the vocal art and a release

of the performer to his beloved purpose to beautify to the utmost the musical instrument of his choice,—his singing voice.

Interestingly enough our concert stage to-day presents to us both the singer who stresses tone to the neglect of diction and the singer who elevates diction to the destruction of tone. It is in behalf of that rarer art which unites the two in indissoluble marriage that we may commend without stint this significant product of Mrs. Baldwin's fruitful and successful work as a teacher.

GEORGE COLEMAN GOW,

Vassar College, January, 1919.

ACKNOWLEDGEMENTS

It is with deep gratitude that I acknowledge the debt which I owe to Dr. Marion Mills Miller, Litt.D., formerly professor of oratory and aesthetic criticism at Princeton University, for his assistance rendered me in the preliminary chapters of this book; and to Dr. Robert Morris Pierce, my teacher in phonetics at Columbia University, without whose help and kindly interest this work would never have been completed.

Adèle Laeis Baldwin

PREFACE

Purpose and Nature of the Work

Linguistic Requirements of Public Singers—Foreign Pronunciation—Relation of Speech to Song—Comparative Phonetics—Physiological Phonetics—Training of the Speech-Organs—Chanting and Singing—Chant-Form.

Linguistic Requirements of Public Singers

THE student of vocal music in this country who expects to qualify for any engagement, to appear on the stage or concert platform or in church choirs, must learn to sing in at least three languages other than English: namely, Italian, French and German. Now, to acquire these foreign tongues in a few years is an impossibility except to the extraordinarily gifted. Then, too, if the aspirant is to be properly trained in the fundamentals of vocal music, the production of pure tone, and reading at sight, and, in order to comprehend the relation of vocal to instrumental music, to learn to play upon at least one musical instrument, as well as receive a general education that he may know the relation of music to the other arts and to life itself, there will be very little time left for him to learn one foreign language, not to speak of three. Accordingly, the ordinary singer either renders these tongues badly, or limits his repertory to English songs, including more or less acceptable translations of foreign ones.

Foreign Pronunciation

It is possible, however, for the music student to acquire the ability to sing in a foreign tongue, and, indeed, in all the tongues mentioned, without undergoing the hard labor necessary for mastery of the language in the linguistic and literary senses. Pronunciation is all that he requires of the several departments of linguistics, and this is the primary and least intellectual one. Milton's daughters read Hebrew to their blind father without understanding its meaning, and they must have read it well to have satisfied his ear, for he was the most discriminating in euphony of all poets—"the organ voice of England." Yet, you will object, the singer, more than the reader, must comprehend not only the thought but the spirit of the author whose work he is rendering. Translation will give the former, and the teacher may supply whatever deficiency remains in interpretation of the latter.

Relation of Speech to Song

Since sounds in speaking and singing are produced in the same way, instruction in them should be fundamentally the same. Singing demands

the highest development of natural powers, and so by general admission it is the supreme vocal art. Since the greater includes the less, the best form of vocal culture for speaking as well as singing is the training of the voice for song with application of principles and exercises to the less exacting requirements of speech.

COMPARATIVE PHONETICS

While the book is limited in subject matter to sounds in the four languages already enumerated (English, Italian, French and German), the pronunciation of Latin and Hebrew sounds (used in church and temple choirs), and those of Spanish, Russian and other tongues may be easily acquired by adding to the speech-sounds which these languages have in common the comparatively few distinctive sounds of each. These with their phonetic symbols are given in a number of books printed in the International Phonetic Alphabet.

The characteristic differences of related sounds in the several languages, when not clearly understood by the student from the charts presented in this book will, of course, be shown by the intelligent teacher, who may inform himself of them by consulting works on the subject in the list referred to.

The study of Phonetics affords the natural basis of training in sound production. Empirical methods for cultivating sound production which ignore scientific principles, while they may occasionally train a naturally gifted student into a good singer, are very unreliable.

PHYSIOLOGICAL PHONETICS

With the study of Phonetics that of Physiology is necessarily involved. The charts at the end of this book show by the arrangement of the symbols the various positions taken by the tongue in relation to the other speech-organs in producing the several speech sounds. The intelligent teacher, guided by the charts, will show the student how, when, and where to use each sound, to see its relation to other sounds, and to associate it immediately with its distinctive symbol.

When the English sounds are thus accurately produced, and are classified and coordinated in ear and mind with their symbols, one of the foreign languages may be attempted. The teacher will point out the characteristic differences between the new foreign sounds and their nearest English equivalents. By this pedagogic principle of procedure through similarity, comparison and contrast from the known to the unknown, the mental and the physical ear of the student may be trained in a natural and easy manner, and hence in an agreeable one. Ear training should be made systematic from the beginning by fixing by dictation the exact sounds as soon as learned. The teacher speaks the new sounds, isolated,

and in words and sentences, for the student to repeat until he acquires the very "taste of the new language," and the words come "trippingly from the tongue" as in his native speech.

Dictation may also be employed to familiarize the student with the phonetic symbols by teaching him to notate sounds, words, and sentences of the English or of a foreign language in the Phonetic Alphabet. Several examples of such transcriptions will be found in Chap. XV.

TRAINING OF THE SPEECH-ORGANS

Special exercises for training the speech-organs have been inserted primarily for the convenience of the author, whose growing classes can no longer be served by manuscript copies, imposing on her either a labor of writing too arduous to be borne, or an expense in typing which is greater than that of printing. However, it is believed that they will be of value in the way of suggestion and addition to other teachers, even though these already possess exercises which have proved more or less effective for the same purpose. It is not intended that students should follow them—certainly not in the beginning of their study—without the aid of a teacher, since individual peculiarities and defects of speech make oral instruction necessary.

CHANT-FORM

Exercises in chant-form follow the drill in training the speech-organs, their object being to afford the student stepping-stones from the word as spoken to the word as sung. Intonation on a given pitch gives flexibility and strength to the speaking voice, and, in the natural order of voice development, requires to be practiced before the tone of the word is prolonged to the artificial extent which is the characteristic of singing that differentiates it from chanting. The practice of chanting also increases the range of the voice, and teaches the coming singer to enunciate any speech sound on any note in the range. In the exercises, however, the range may be graded by the teacher so as not to strain the vocal muscles while the student is practicing to perfect his enunciation.

CHANTING AND SINGING

The essental *difference* between chanting and singing, on the one side, and ordinary speaking on the other is in the physical (mathematical) *exactitude* in pitch and pitch-relation, which is required in the former, but not in the latter. Minor differences are a similar exactitude in length, intensity and volume of sound, and what phoneticians call "assimilation," or the tendency of sounds to become alike, an effect produced upon a speech

sound by a preceding or succeeding sound (see Chap. V). To the extent to which it is heard in ordinary speaking, assimilation cannot be permitted in singing, chanting, or even in dignified declamation. The singer should strive to enunciate his words as they "ought" to be spoken, not as they *are* spoken in every-day speech, which is more or less slipshod in its rebellion against artistic convention. For example, vowels are slurred and even omitted in common speech. In chanting and singing, every syllable must contain a vowel clearly enunciated, since this is the sound that carries the tone.

PART ONE

PRINCIPLES

CHAPTER I

Phonetics Applied to Diction

Meaning of Lyric Diction—Voice-Training for Children—Three Requirements—"Vox Americana"—Phonetic Symbolization—The International Phonetic Association.

THE meaning of the word Diction as the singer and actor use it is not the one generally accepted, nor that, indeed, given in the dictionaries, where this term is applied exclusively to literary style. "A choice and use of words" does not include the musician's meaning when he describes either the act of producing speech-sounds in song, or the product itself. The necessity of having a term to cover these functions is generally recognized, and musicians, instead of inventing a new and distinctive word for it, as would have been preferable, have resorted to the analogous term in the sister art of literature, and employed it for their purpose. To the elements of Diction in the literary sense (vocabulary, phraseology, figure, etc.), dealing broadly with literary style in the rhetorical and psychological aspects, the musician has thus added two other and more specific ones of a purely physical and physiological nature: articulation and enunciation, which together compose pronunciation. The term Diction as thus expanded has been accepted by the public as well as the musical profession, if not by the lexicographers, and thus being sanctioned by usage it may legitimately be applied to song and elocution as well as to literature.

Voice-Training for Children

When is the time to begin the study of Lyric Diction? It is when Diction or Speech in the broad sense is being first acquired, that is, in early youth. Then it is that instruction should be given in proper breathing and pronunciation and that degree of intonation which is common to both speech and song. It is, however, only after the pupil has entirely passed the critical stage of puberty, when the male voice changes into the distinctively masculine quality and when the female voice develops into that of the mature woman, that it is safe to begin a thorough training in singing. Hence the acquirement, first at home and then in school, of correct habits of speech is of all accomplishments the most important, not

only for its own sake, but also as the foundation of an art which, unlike drawing, acting, etc., cannot be taught in its distinctive phases in childhood or adolescence. Almost every singing-teacher has to spend valuable months, and in some cases years, in correcting in pupils bad habits of speech for which parents and school teachers were responsible. Accordingly, *musicians as a profession* should urge upon parents the correction of their own faulty diction upon which that of their children is modeled, and demand that school teachers be rejected, whatever be their proficiency in other departments of instruction may be, if they cannot pronounce English in an acceptable manner. A teacher is not desirable if he abuses the diction of the language in the linguistic and literary senses, habitually using bad syntax and an improper vocabulary. Yet these faults are more easily corrected in the pupil than is bad diction in the phonetic sense.

I have made it a practice, when one of my pupils reveals the prevalence of bad pronunciation in his household, to employ the channels of diplomacy in making the parents aware of the fault, with the gratifying result oftentimes that I have added at least one of them, the mother, to my class, if not that in singing, at least that in pronunciation.

When, then, is the time to begin the study of Diction? Madame Sembrich says that it is "at the first singing lesson," and it is here that it is bound to begin whether or not the teacher realizes the fact and in his instruction acts upon it, or the student knows it and desires it. The instant a tone is made in singing it is shaped by the position of the speech-organs, a sound in vowel form being the result if the emission is free (the character being determined by the shape of the buccal cavity), and one in consonant form if the emission is modified or impeded by one or more of the speech-organs. Therefore, to the teacher of both singing and elocution, I would say: After the student has been instructed in Breathing, let him take up the training of the speech-organs in the production of speech-sounds.

THREE REQUIREMENTS IN DICTION

Because the primary object of speech is to convey thought by means of words, and to impart emotion by symbolizing it through the medium of sound, the formation of speech-sounds is a fundamental element of Tone-Production, and therefore should be studied either before the subject is taken up, or simultaneously with it.

There are three distinct and positive requirements in this study: we should speak

(1) distinctly; (2) correctly; (3) beautifully.

(1) We should speak *distinctly* in order to convey the *thought*. We could, in the manner of primitive man, make ourselves partly understood

by actions of the nature of gesture or pantomime and by animal-like cries, but civilized man expresses himself primarily by articulate words to which bodily action and ejaculation are subsidiary — and articulate utterance implies distinct utterance.

(2) We try, as human beings in a social order to regulate the conduct of life in all things according to accepted and approved *usage* (good form), and therefore, as language is the chief means of intercourse with our fellows, we should, above all else, speak *correctly*—that is, according to an accepted standard. This is peculiarly difficult of accomplishment in English, for we have no recognized authority for its pronunciation, such as the French have for their language in the *Académie Française,* that select body of men of arts and letters whose stamp of approval on usages of their tongue is universally acknowledged; or such as exists in Italy in *la Crusca,* a similar organization of like authority; or as we find in the German *Bühnenausprache* (pronunciation of the stage), which is accepted as standard not only for actors, but also for all cultivated people. The English teachers of singing and speaking should unite with that considerable body of literary men who advocate the establishment of an English Academy or other recognized authority in literary diction and pronunciation, in order that an end may be made to our Babel-like confusion of speech, and that our noble language may not suffer disintegration, but may be preserved in its purity, with all additions thereto made in the native, uncontaminated spirit of the tongue.

(3) Since language is an art, and so appeals to the æsthetic sense, we should speak *beautifully,* that is, talk in tones which are in their very sound productive of the intended emotion (mood), and are suggestive and illustrative of the meaning of the words. Man's ability to express thought by means of words is his greatest gift and his distinctive function, and hence the expression of thought should be honored by fitting adornments and cherished by graceful endearments. It is the man behind the voice as well as behind the book that should be the object of our interest, since through him is expressed personality, which is the soul of art. The charm of a rich, resonant tone adds immeasurably to the voice. If we but realized this we would pay far more attention to our voices than we do to our personal adornment, for the artificial embellishment of which most people sacrifice in money, time and energy a hundredfold their expenditure for the cultivation of their natural endowments.

In order that the student may recognize speech *as it should be,* it is important that he study with a teacher who at all times, in the class room or on the concert stage, is entirely free from *vulgarism, affectation* or *provincialism,* so that he may rest assured that the teacher's speech is truly standard, and to be followed, therefore, with absolute reliance.

"VOX AMERICANA"

Since people are, consciously or unconsciously, strongly attracted or repelled by the tones of the voice, many natures are woefully misunderstood, much to their owners' grief and amazement. How often do we hear words that are kindly intended, but which are uttered in a sharp tone so irritating that it reverses the meaning, and leaves the impression of a disagreeable disposition and an aggressive personality in the speaker! When I meet my compatriots abroad, who are at all times appropriately and becomingly dressed, I am very proud, until *I hear them speak.*

And it is an associated national defect of character that the vast majority of our fellow citizens are indifferent to their vocal deficiency, and will at times parade their opinion of its unimportance. Let a cultivated speaker point out to them that the "Vox Americana" drops final consonants, thus skewering the words together, and grinds out all the sounds on the back teeth, thus destroying the varied beauty of English speech, they smugly reply: "Oh, don't bother about how I *say* a thing, so long as you get my meaning!" And when this pronunciation is pitched in a high shrill key, and twanged as it were through the nose, whether in drawing room or servant's hall, in street or shop, or even in the class-room (by teacher as well as students), the hearer, if he knows his Shakespeare, is reminded, through the psychological principle of contrast, of King Lear's characterization of his daughter Cordelia's voice in his description of her as the ideal of womanhood:

"Her voice was ever soft, gentle, and low, an excellent thing in woman."

And in man, too, Shakespeare might have said, for clear diction and good voices are the exception rather than the rule in office and pulpit, at the bar, and in legislative halls and in places of public assembly, where the minds of hearers are strained to catch the meaning of indistinct words, and their ears are jarred by sentences barked throatily out from the untuned speech-mechanism.

Yet I would not be unfair to our countrymen and countrywomen by singling them out for censure. The average Briton also has characteristic faults of diction, though these are not so unpleasant to the hearer because of the modulation of his vocal tone. When an American has overcome defects in diction and tone, his speech is essentially the same as that of the Briton who has similarly corrected the vocal faults of his nationality. The voice of Edwin Booth chimes in our memories with that of Henry Irving in pure concordant tone such as the great bells of China and Japan possess, which, having been cast from the same metals and fashioned on the same principles, know no distinction of nationality.

PHONETIC SYMBOLIZATION

It is to the credit of musical education in America that the study of Diction is now attracting the special attention of our singing-teachers, who realize its prime importance in training of the voice. Unfortunately, however, there is a great and lamentable difference between the written symbol and the spoken sound. This must be corrected if the study of Diction is to become thorough and its practice uniform. Accordingly, a single standard for pronunciation and its symbolization must be adopted. Demand for this by the singing teachers of the country is only of recent date. That agreement upon such a standard is most difficult will be seen when we consider the delicate shading of vowel sounds in English, and the fact that the same orthographic signs have for centuries been made to represent all members of groups of these shadings, and in certain cases, shadings unrelated physiologically to the other members of its group.

A language to be perfectly phonetic, must have one and only one symbol for each sound, and one and only one sound for each symbol. In the democracy of letters "plural noting" is as illogical as is "plural voting" in a political body. Now, of all the languages, including the most primitive, English is the most deficient and erratic in its orthography. Its alphabet contains 26 letters, three of which duplicate other letters or combinations of letters, whereas the language has at least 41 distinct sounds. To give examples for comparison, the ratio of Italian letters to sounds is 20 to 28; of French 21 to 38; and of German 21 to 39. Five letters in English represent a total of 17 vowel-sounds. The ratio in Italian is 5 to 7, in French 5 to 16, in German 5 to 14.

The English problem is further complicated by the continual changing of which its notation takes no heed, for the rule that "Litera scripta manet" (the written word remains) has defects as well as merits. The result is confusing no less to native students than to those of foreign birth. The adoption of a phonetic alphabet will solve the central problem of pronunciation for every person using the language for any purpose whatever.

It is with the student of music, however, that we are here particularly concerned. Not until all singers are agreed upon the proper pronunciation of each sound (and this will not be achieved until a scientific symbolization is adopted as a standard) will vocal music become as exact an art as instrumental music, and therefore capable of being performed with like certitude.

Every vocal teacher who pays proper attention to Diction must have felt, indeed, must continually feel, the need of a *universal speech-sound notation,* by means of which the pronunciation, at least, of any language may be acquired in a comparatively short time, the subjects of syntax,

composition and rhetoric being, as such, either dispensed with, or relegated to a later and more convenient season of study.

Such a notation-system is presented in the alphabet of the International Phonetic Association. In this alphabet, which has been agreed upon by the leading phonetic scholars of the world, every sound has a separate symbol, a letter with a distinctive shape, and hence requires no diacritical mark to show pronunciation. Since there are divers and conflicting systems of diacritical marking, leading to endless dispute, the Phonetic Alphabet is destined to become at least the standard method of indicating pronunciation, even if it shall never supersede the general use of the Roman and other prevalent alphabets in practical orthography. Indeed, it is not intended to take the place of these alphabets, but to supply symbols for sounds that have no distinctive representation of their own.

The written form of no language is strictly or completely phonetic (that is, containing a distinctive letter for each sound in the spoken language), not even the Italian language, though it is more so than any other. Accordingly, the student is compelled to study each language in two, more or less discordant, aspects. These are: (1) the Orthographic, or the manner in which it is written; and (2) the Phonetic, or manner in which it is pronounced. When the Phonetic Alphabet is used the order is reversed, and complete concord between the auditory and visual aspects is attained. The student first *listens* to a sound and repeats it, and then he looks at the symbol of the sound and writes it down. Thus he learns to associate one with the other in whatever situation he meets with either, whether in his own language or a foreign one.

Since every sound, regardless of the language in which it occurs, has its distinctive symbol in the alphabet adopted by the International Phonetic Association (and there are more sounds common to different languages than is usually supposed), the study of English pronunciation renders it possible for the student almost at once to master the pronunciatoin of a foreign language when he comes to extend his linguistic education.

The Phonetic Alphabet is therefore the most fundamental and economic as well as the most thorough and exact accomplishment that the student of languages can acquire. And if one is not interested especially in linguistics, the study of the Phonetic alphabet will be of great value to him as a person of reading and culture, since the artistic principles of every literature are deeply entwined with the nature of its language, while the habit of scientific analysis imparted by learning the alphabet will clarify his thought, increase his knowledge, and thus enhance his intellectual power.

I herewith present my application of the Phonetic Alphabet to instruction in Diction for consideration by other teachers of vocal music. It

will, I am confident, be helpful also to teachers and students of public speaking.

In order to apply the Phonetic Alphabet to the particular needs of singers and public speakers the symbols have been transcribed in their "clear" or, as they are sometimes called, their "strong" forms. The former term is preferable in order not to connote stress, which is not necessarily associated with the forms.

Owing to peculiarities of pronunciation inherent in every person, to physical defects, or to local influence in subtly changing normal speech sounds, the only effective way to teach the proper pronunciation of the symbols is by oral explanation and *viva voce* illustration. The pupil's *ear,* thus trained, will instantly recognize the symbols, and repeat their respective sounds either in voice or to the mind's ear. When he has learned to voice (phonate) the symbols in sounds of familiar words, he can readily apply them to sounds of words in a foreign tongue.

The International Phonetic Association

The Phonetic Alphabet presented in this work, with a few minor changes, is the one officially used by the International Phonetic Association, a society founded in 1886 by persons of various nations for the study of speech sounds in all languages. The members now number about 1500, 450 of whom are in Germany, 400 in Great Britain and Ireland, 120 in the United States of America, 100 in France, and 80 in Denmark. Almost every country which has a literature is represented.

Books in phonetic transcription are continually being published by members of the Association. A list of these, together with further information concerning the Alphabet and the Association may be obtained by writing to the secretary, Dr. Paul Passy, Bourg-la-Reine, Seine, France.

The Alphabet was adopted in 1888. It is used in the official organ of the Association, *Le Mâitre Phonétique,* the editors of which are Paul Passy, Litt.D., Professor of Phonetics at the Ecole des Hautes Etudes, Paris, and Daniel Jones, University College, London, England. Although published in the French language, the magazine contains contributions by members of the Association in other languages. Every article is written in phonetic transcription.

The following table presents the Alphabet with all the forms employed in the text and charts of the present work. Key-words to aid pronunciation are given in English, Italian, French, German and Spanish. A dotted line indicates that the sound does not occur in the language named at head of column. The sound of each phonetic symbol forms its name.

THE INTERNATIONAL PHONETIC ALPHABET

CONSONANTS

	English	*Italian*	*French*	*German*	*Spanish*
d	do	due	dos	das	andar
t	toe	tema	tasse	Ton	tinta
n	no	naso	nid	Name	normal
l	life	lega	loup	Land	libro
r	red	rosso	rose	Rede	carro
ɹ	singer	.....	.....	.....	saber
ð	then	.....	.....	.....	nada
θ	thin	.....	.....	.....	cincha
z	zeal	paese	zéro	See	(mismo)
s	sun	sono	sel	Wasser	sello
ʒ	azure	gelo (**dʒ**)	jaune	.....	.....
ʃ	she	scena	chaise	Schall	chica (**tʃ**)
j	yes	.....	fille	ja	yerba
ç	human	.....	.....	ich	.....
ɲ	.....	signor	mignon	.....	señor
ʎ	.....	egli	.....	.....	llamar
g	go	grande	garde	Geld	gallo
ɡ	.....	.....	.....	.....	(accion)
k	kick	canto	képi	Krone	cantar
ŋ	sing	(lungo)	.....	lang	(pongo)
R	.....	.....	(uvular R)	.....	.....
x	.....	.....	.....	Dach	jarro
m	mine	madre	mais	Mann	mozo
b	but	bocca	bleu	Bart	hombre
p	poet	posa	peur	Post	perro
w	west	.....	oui	.....	.....
ɥ	.....	.....	suis	.....	.....
ʰr	when	.....	.....	.....	.....
v	vale	vivo	voeu	wo	.....
ʋ	.....	.....	.....	.....	obviar
f	foe	fido	force	Fest	fuerte
ɦ	behold	.....	.....	.....	.....
h	house	.....	.....	Haus	.....
ʔ	.....	.....	.....	ab	.....

Each obviously distinct quality of speech sound is represented by a distinct symbol, and the length mark is reserved for its proper function of indicating duration only.

The modifiers herein used are:
ː To indicate that the preceding sound is long.
· To indicate that the preceding sound is half long.
˕ To indicate that the tongue is slightly lowered.
˔ To indicate that the tongue is slightly raised.

THE INTERNATIONAL PHONETIC ALPHABET—Continued

VOWELS

Symbols	*English*	*Italian*	***French***	*German*	*Spanish*
i	machine	io	ici	Ihm	mio
ĭ	.....	ieri	.....	.....	hierba
y	.....	.....	une	für	.....
ɪ	it	.....	.....	Ring	.....
Y	.....	.....	.....	Hütte	.....
ɪ	pity	.....	.....	.....	.....
e	vacate	sera	été	Reh	puedo
ø	.....	.....	peu	Höhle	.....
ɛ	let	ecco	près	Kern	verbo
ɛ̃	.....	.....	vin	.....	.....
œ	.....	.....	peur	Hölle	.....
œ̃	.....	.....	lundi	.....	.....
ə	abide	.....	de	Gedanke	.....
æ	at	.....	.....	.....	.....
a	ask	.....	patte	.....	saber
ɑ	father	padre	âme	Vater	(agua)
ɑ̃	.....	.....	dans	.....	.....
ɒ	not	.....	.....	.....	.....
u	whoever	una	sou	Uhr	puro
ŭ	.....	guado	.....	.....	cual
ʊ	book	.....	.....	Hund	.....
o	poetic	come	tôt	Hof	boda
ʌ	but	.....	.....	.....	.....
ɐ	urge	.....	.....	.....	.....
ɔ	door	donna	poche	Post	norte
ɔ	all	.....	.....	.....	.....
ɔ̃	.....	.....	bon	.....	.....

ˌ To indicate that the tongue is slightly advanced.
ˍ To indicate that the tongue is slightly retracted.
ˬ To indicate that the sound above is devocalized.
˜ To indicate that the sound beneath is nasalized.
‿ To indicate that the sound beneath is semi-vowel.
ˈˈ To indicate that the following sound has extra strong stress.
ˈ To indicate that the following sound has strong stress.
ˌ To indicate that the following sound has subordinate stress.

CHAPTER II

Breathing

"Who Breathes Best Sings Best"—Faults in Breathing—Breath-Efficiency—Physiology of Respiration—Breath and Voice.

PACCHIEROTTI, a celebrated Italian singer of the seventeenth century, uttered the most primary of vocal principles as well as the most practical of its maxims, when he said: "Chi sa parlare e respirare, sa cantare" (He who knows how to speak and how to breathe knows how to sing). And Francesco Lamperti, his equally distinguished compatriot of our own time, re-echoed this sentiment in the dictum: "He who breathes best, sings best." If American singers realized the greatness of this truth and followed the precept to the fullest extent, there would be far less criticism of the English language as a medium of song than at present is indulged in by unthinking people, especially those singers who seek an excuse for their shortcomings. On the contrary, it would be demonstrated that our tongue, in fulness and shading of phonetic quality, lends itself to the rendition of song as richly as it does to poetry and oratory, in which by universal admission it has no superior. The vocal teacher, instead of neglecting Diction as a study apart from singing, as is too often the case, should strive to train the entire vocal instrument, from diaphragm to lips, by special exercises, rather than rely upon the practice of singing to accomplish this incidentally.

"Chi sa parlare." When, in Hamlet's phrase, the words come "trippingly from the tongue," and only then, may we be sure that all is well with the speech-organs, and that they are free to execute the purpose and express the mood of the singer. This is one-half of the art of singing.

"E sa respirare." He who has learned to control the breath in expiration for singing, has mastered the other half of the art.

Faults in Breathing

To tell a student to breathe naturally is misleading, for few of us breathe as nature intended. For this failure there are various reasons, which may be classified as follows:

1. Defective or undeveloped physical organs, such as sunken and narrow chest, stiff throat muscles, elongated uvula, enlarged tonsils, cleft palate, obstructed resonators (especially the nasal passages), and defective teeth.

2. Physical impedimenta, such as adenoids and other growths which prevent full inhalation and free exhalation of the breath.

3. Artificial impediments, such as tight corsets and collars, causing similar interference.

4. Bad habits, such as improper carriage of the body, and, above all, improper modes of breathing, such as the use of only the upper part of the lungs by action of the clavicular muscles, instead of the use of all the lung cells by action of the diaphragmatic, intercostal and abdominal muscles, the movements of which extend the bellows of the singing machine to the fullest extent, and blow the flame of song to its highest and purest fervor.

Breath-Efficiency

Not only for singing, but also for public speaking, and, indeed, for ordinary conversation, should there be breath-efficiency: that is, the ready and easy utilization to any desired extent of the motive power of utterance, which is "lung-power." A correctly pronounced, clearly enunciated, beautifully toned, and rightly emphasized sentence must be properly divided into comfortable rhythmic groups of syllables in which, from beginning to end, the breath supports the "tune of speech" and its constituent notes or speech sounds. And in singing, good phrasing, with effective pauses for breath, is as important as are proper pronunciation and clear enunciation, since the crowding of too many syllables into a phrase uttered in a single breath imparts to the listener a feeling of discomfort which prevents him from according to the singer due recognition for his triumphs in other departments of vocal art.

But the amount of breath employed in ordinary conversation, or even in public speaking, is not sufficient for the singer who sings far more prolonged phrases, and must fill vast concert-halls and opera-houses, and the control of the breath for these purposes is not so easily acquired by the singer as by the speaker. Both the amount of breath and the degree of its control must be extraordinary in order to support the singer's tone to the end of the phrase without breaking.

Physiology of Respiration

In order to practice breathing properly it is necessary to have a clear knowledge of the anatomy of the organs of respiration, and of the physiology of the act.

These organs are contained in the chest, or that upper part of the trunk of the human frame which is called the Thorax. They are: Lungs, Diaphragm (the supporting membrane), and their attendant muscles. The muscular process by which the lung-space is enlarged and inflated with air, is called Inspiration. The return of the muscles to their normal position as the air is expelled from the lungs is called Expiration. Both processes together constitute Respiration.

The diaphragmatic muscles, in conjunction with the abdominal muscles are used in inflating the lungs. The initial sensation for inspiration is felt

at the diaphragm. This presses downward during inspiration. The movement is followed by the expansion of the ribs, which enlarges the thorax. As the diaphragm descends and the ribs widen, the air rushes into the increment of space. The vocal cords should be open and passive to avoid noise in the inrush of breath. In expiration the diaphragm relaxes and the inter-costal muscles become active.

BREATH AND VOICE

The air flowing in and out of the lungs has two distinct functions:

1. That of giving and sustaining life by oxygenating the blood. The process is called Breathing, and the air in its movement Breath.

2. That of conveying vocal sound. The process is called Voicing and the sound, Voice.

Both processes are used in producing speech sounds, which are divided into Vowels and Consonants according to the nature of their production.

1. In Breathing, the air in the lungs passes through the larynx without tension or vibration of the vocal cords, the glottis being wide open, and there being no obstruction by the speech-organs of the air's function in oxygenating the blood, although the breath may be utilized at the same time in the pronunciation of various consonants.

2. In Voicing, the breath, by the induced action of the vocal cords, is charged with vibrations producing a new sound entirely differing in kind from breathed sound, and known as Voiced Breath, or, simply and preferably, as Voice. This is the foundation of vocal tone and the spoken sounds.

CHAPTER III

Organs of Speech

Practice in Whisper—The Speech-Organs—The Larynx—The Tongue—The Soft Palate—The Hard Palate—The Lips—The Teeth—The Lower Jaw—The Glottis —Classification of Speech-Sounds—Consonants—Vowels—Clear and Obscure Vowels —Glides— Assimilation.

Practice in Whisper

In the case of all the sounds, practice in whisper should precede vocalization, since the acoustic values are more clearly and keenly sensed when the sounds are deprived of the resonance attendant on voice. Reading in a clear whisper is also an excellent exercise for developing the respiratory organs, and for demonstrating that much more breath and effort are required for speech than for the mere oxygenation of the blood, as well as that voice requires less breath than whisper. Practice should be very brief at first; then gradually increased until no more sense of fatigue or special effort is developed in extended whispered reading than in reading with the voice. When the student has learned the phonetic alphabet, whispering any text printed in it will further familiarize him with the exact acoustic nature of speech-sounds, and with the way in which these are affected by sounds in immediate conjunction with them.

The Speech-Organs

A Speech-Sound is any sound produced by the moulding of the breath or voice stream into definite auditory shape by two or more of the formative Speech Organs.

The Chief Organs of Speech are the Larynx, the Tongue, Soft Palate (Velum and Uvula) Hard Palate, Lips, Teeth, Lower Jaw.

The Larynx

The larynx, or "voice-box," is the most important, basic, or fundamental of the organs of speech, as well as of song. It forms the top part of the trachea or windpipe, and consists of a number of cartilages controlled by a system of muscles and nerves. In its outward aspect the larynx is familiarly known as the "Adam's Apple." Inside the larynx are the vocal cords, two parallel horizontal folds in the lining of the right and left side walls, extending from front to rear across the chamber of the larynx. The opening between the vocal cords is known as the glottis. It is by the interaction of the vocal cords and the breath which passes through the glottis between them, that the musical sound, or tone, called *voice,* is produced.

THE TONGUE

The tongue is the largest of the muscular organs of speech, and one of the most difficult to control. It is composed of a number of muscles rooted in the floor of the mouth, to the lower jaw, at the roots of the lower front teeth, and at the back and rear, to the hyoid or u-shaped tongue-bone, and does not, as is often supposed by vocal students, proceed directly out of the pharynx or throat, nor derive its motions from that region. It is true that the root of the tongue is not far from the larynx, but any attempt to control it from this point results only in stiffening the organ by impeding the movement of the proper muscles, thereby impairing not only pronunciation, but, as will later be seen, resonance also, as well as causing affections of the throat. On the contrary, the proper use of the forward portion of the tongue in forming speech-sounds induces mobility in the back part, and permits free action of the larynx and the opening of the throat in the production of voice. The forward muscles, by their various attachments, give the tongue marvellous mobility by radiating upward and outward through every part, and so causing the freest portion, the tip, to point in every direction, and curve into every physically possible shape.

In repose, the tongue rests in its bed with its tip against the lower front teeth. This passivity is required to produce the full resonance of the mouth-chamber in singing, and is desirable during the intervals of the use of the tongue in speaking, especially in the enunciation of vowels. On these occasions the student should be *entirely unconscious* of the organ. Otherwise it will be in truth "the unruly member," "putting in its oar" to throw the other organs out of stroke, and so will impede the smoothly running course of song and speech.

The functions of the tongue may be divided into two general classes: (1), to alter the shape of the resonance-cavity for the production of voice-tone, (2), to assist in the articulation of speech-sounds, by its special free movements and its contacts with other organs. The first function will be touched upon in the chapter of Tone-Production. It is with the second functions that we are here concerned.

The moulding of the mouth-passage, by the position of the tongue alone forms most of the vowels, and, with the modifications made by the lips and soft palate, the remaining ones. The slightest variations made in the shape of the resonance-chamber by the tongue is sufficient to produce any one of the innumerable shades of vowel-sounds which are heard in any language.

The contact of the tip, blade, middle, or back of the tongue with the other organs of speech, and the separation therefrom, produce most of the consonants, either by friction, percussion or trill.

It requires less effort to control the tongue for vowels than for consonants. When once the position has been taken for the desired vowel, the tongue should not make a conscious effort to retain it. When the pitch changes the tongue should neither rise nor fall with it; but should lie loosely and passively controlled in the vowel position. In enunciating the vowel "vanish" in a diphthong, the action of the tongue alone without the interfering action of the jaw should make the sound.

The Soft Palate

The soft palate lies immediately back of the hard palate, the two forming the roof, or vault, of the mouth. As the distinguishing adjective in the term implies, the soft palate is, unlike the hard palate, made up of yielding or flexible muscular tissue. The part directly behind the hard palate is called the velum (veil). This acts by its partial or complete dropping as a swinging door for the breath, permitting or preventing its exit or entrance by either nose or mouth. To use another figure, it is a switch with power to shunt the train of breath from one track to the other.

The velum terminates in a pendulous conical organ called the Uvula, a word which means in Latin "little bunch of grapes," but which in English has the more fitting synonym of "Throat-Tongue," since it performs functions of speech in a manner similar to that of the Mouth Tongue.

The soft palate, in conjunction with the back part of the tongue and breath modifications, produces the Postero-Linguo-Velar consonants. The so-called nasal vowels in the French language are all modified by the partial dropping of the velum. The velum should not function in English vowels, since the slightest nasalization of these is a barbarism, foreign to the native phonetic quality.

The exact action of the soft palate in the production of tone is a subject of heated controversy between physiologists on the one side and singing-teachers (with the backing, be it said, of high scientific authority) on the other. Up or down? "that is the question." The physiologist contends that, when the soft palate is raised, it shuts off more than half the resonating cavities. The teachers and all the eminent singers declare, from personal observation and sensation, that not only does the soft palate rise for the higher tones, but it *must* do so but without *voluntary* action. In my own case, I find that the velum rises whenever the voice is pitched above the tones in the speaking-range. Indeed, in the very highest tones the uvula merges into the soft palate. Yet, in producing these tones I still retain the sensation of resonance in the superior cavities. Apparently, therefore, the raising of the velum does not materially obstruct the passage of sound-waves of the voice into these

cavities. In striking corroboration of this I quote from "Resonance in Singing and Speaking" by Thomas Fillebrown. See page 11):

"The uvula, the pendulous tip of the soft palate, serves as a valve more accurately to adjust the opening behind the soft palate to the pitch of the voice.

"In producing a low tone the soft palate is relaxed and hangs low down and far forward. As the voice ascends the scale the tension of the soft palate is increased and it is elevated and the uvula shortened, thus decreasing the opening behind the palate, but never closing it. In fact the larger the opening that can be maintained, the broader and better the tone. The author was himself unable fully to appreciate this until he had become able to sense the position of the soft palate during vocalization."

Dr. H. Holbrook Curtis, the eminent throat-specialist, in hrs book, "Thirty Years' Experience With Singers" writes: "I have always maintained that the soft palate has a special adjustment for every note sung; . . . its real function is that of a stop, attuning the cavities of the mouth and nose by becoming a portiere which, drawn over the pharynx, apportions the sound waves to those cavities best calculated to re-enforce the fundamental tone and make rich the voice in overtones."

THE HARD PALATE

The hard palate is a fixed, and not a mobile part. Forming both the roof of the mouth and the floor of the nasal cavity, it acts as a sounding-board for tone, and is a point of contact for the formation of lingual consonants.

THE LIPS

The lips take an active part in the production or modification of consonants and vowels, though in the latter case they are *subsidiary* to the tongue, *following* its lead. By the rounding or labializing of the lips for vowels the size of the resonance-chamber of the mouth may be diminished, increased and modified in shape. Back vowels usually have more lip-rounding than front vowels. In French and German several of the front vowels are lip-rounded. The singer should avoid exaggeration in any form such as contracting the lips or spreading them at the mouth corners by either the inner or outer muscles; The lips should neither expose the teeth too much, nor conceal them. Pursing or protrusion of any sort should be avoided. If the lips are rounded for a vowel *before* the tongue is active (except in exercises for flexibility) stiffening of both jaw and tongue is apt to result, with consequent change in the vowel quality and tone. There should be no *tension* of the outer muscles, the slightest rounding of the *inner* muscles at the sides being sufficient for all purposes. In short, the lips should never be active for vowels which do not require lip modification.

THE TEETH

The teeth, like the hard palate, are fixed, and not mobile parts. It is obvious that they should be kept in good condition, and that the dentist should be employed to fill gaps and aline irregular teeth, especially those in the front of the mouth. The teeth are wholly passive, merely furnishing a point of contact for the tongue in the formation of dental and labio-dental consonants. All vowels may be sounded with the teeth closed, but their quality is then changed and deadened.

THE LOWER JAW

The lower jaw is an adjunct to the organs of speech rather than an agent proper. It furnishes a place of attachment for the muscles of the tongue and of the hyoid bone, and through the latter controls the muscles which fix the position of the larynx, relaxation of the jaw causing freer action of the vocal cords. In sound formation it should passively follow the leading of the other organs. When poise has been lost in passion, the jaw is apt to close with a snap, thus calling attention to its primitive power to inflict physical injury. This sort of "jawing" and chopping off of words should be avoided.

THE GLOTTIS

The only sound of importance for our consideration formed at the glottis is **h** ("aspirate").

CLASSIFICATION OF SPEECH-SOUNDS

The verb "to articulate" should be applied to consonants alone, while "enunciate" in the same sense should be reserved for vowels. The term "pronounciation" is inclusive of both these actions. It may be used for syllables, words, phrases and sentences, as well as for sounds.

CONSONANTS

A consonant is a speech-sound produced by the constriction, sometimes amounting to complete stoppage, of the breath by the organs of speech.

All the ordinary consonants, except the glottal stop and **h**, may be either breathed, whispered or voiced.

VOWELS

A vowel is a speech-sound which consists primarily of voice or tone produced in the larynx by the approximation and vibration of the vocal cords, and derives its definite or musical quality from this fact.

The different vowels are organically distinguished, one from another, by the various configurations or poses assumed during their production, by the organs of speech located above the larynx. The different shapes

or forms of the cavities of the pharynx, mouth and nose thus produced or modified by the positions and muscular state of the mobile parts, such as the tongue, velum, and lips, constitute resonance-chambers of various forms peculiar to the various vowels.

A vowel is therefore a sound characterized physically by resonance, and acoustically by tone and consequently by relative sonority or loudness. The dividing line between consonants and vowels is not a definite line, for on the border land between them, are the organically more constricted, more open, and when voiced more sonorous consonants, such as **n**, **ŋ**, **m**, **l**, **j**, **w**. The word *resonance* means, a re-sonance, a sounding or, as it were, an echo; and the implication of the word here, as in the science of acoustics, is that the fundamental or other tonic sound-waves originating at the vocal cords are reinforced, added to, or otherwise modified.

Since vowels, however, usually carry the greater part of the tone of speech, it might seem best to discuss them first, but for practical reasons, it is advisable to begin with consonants. The consonants involve active control of the speech organs; the vowels mere passive control.

CLEAR AND OBSCURE VOWELS

Under the influence of weak stress, a sound which is ordinarily clear, may become weak, as when the definite article *a* becomes **ə**. Under the influence of stronger stress, a sound which is ordinarily obscure, is often erroneously changed to a clear vowel in the utterance of public speakers, ministers, and singers, who imagine that the tone can be more easily carried on a clear vowel, and the vowel to which they fancy it to be nearest related organically is substituted: **'dəktəɹ** for **'dəktəɹ** (doctor), **'eɪndʒɛl** for **'eɪndʒəl** (angel).

GLIDES

In the complete articulation of any speech-sound, which is, typically, an isolated sound, or one which is both preceded and followed by a complete pause, there are usually considered to be three stages: (1) the approach or on-glide, (2) the tenure or held portion, (3) the release, or off-glide. In the approach, the organs pass from the neutral position which they have occupied during the pause, into the pose characteristic of the held or continuant part of the articulation. The organs, after having occupied this position for the required time, are then, during the release, returned once more to their neutral position. In the myriad permutations and combinations of sounds constituting actual speech, however, this typical procedure of sound-production is scarcely ever adhered to, for, in ordinary utterance, none of the sounds is usually produced in such isolated position. Even when a sound is both preceded and followed by a pause, the pauses are apt not to be complete pauses, in which the

organs of speech are in a wholly neutral or passive state. But, and this is still more important, each speech-sound is, as a rule, preceded and followed, both immediately and otherwise, by other speech-sounds; and the articulation by which each of these surrounding sounds is produced exerts a certain, and often a very powerful, influence upon the articulation by which the particular sound under consideration is itself produced.

It may be seen from the above exposition that a glide is a transition-sound or sound in whose production the organs are not held for any appreciable time in any determinate position—an intermediate sound, of dual quality, common to what precedes and to what follows it. The **h**-sound is often classed as a glide, rather than as a regular speech-sound or phone, on the ground that, in its articulation in the larynx, the cords occupy no constant pose, but are merely either approaching each other, or, in some cases, receding from each other. In the stop consonants, or occlusives, the approach or the release may be quite as important as the tenure, which, if merely breathed, as in **t**, **k**, **p**, is in itself inaudible, and, even when voiced or whispered, as in **d**, **g**, **b**, is capable of only a brief duration or continuation in contrast with the open consonants, such as **s**, **z**, **l**, **m**.

ASSIMILATION

Assimilation is the process or fact of becoming similar. When two different contiguous sounds become more alike or similar, they are said to undergo assimilation. An example of this is, **ɪʒ-ʃi** or **ɪʃ-ʃi**, for **ɪz-ʃi** (*is she*); **æʒ ju** for **æz ju** (*as you*).

Correct singing consists largely in bringing each of these factors under control, and either rejecting it or else modifying it, so as to produce the best aesthetic effects, while still retaining the intelligibility of good speech. The chance assimilation, like the chance linkings of colloquial speech, is usually rejected; but duration and pitch are used to the fullest extent for the production of desirable effects. Vowel-quality should, in general, remain constant in spite of changes of pitch or length.

CHAPTER IV

Breath Force

Stress—Impulsation—The Syllable—The Word—The Pause—The Phrase—Rhythm

In the normal production of speech, the sounds are uttered by means of breath expelled from the lungs in successive puffs or impulses, each of which has a certain strength or force. The breath-force, or strength of the breath-impulse, is called dynamic accent or *stress*. The term "stress" may refer either (1) to the *absolute* degree, or general standard, of the breath-force employed throughout an entire utterance or passage, or (2) to the *relative* degree of breath-force with which the successive portions of any utterance, such as a word, a phrase, or a sentence, are produced.

The relative force of the breath in successive impulses may for convenience be divided into (1) *very weak,* (2) *weak,* (3) *half-strong,* (4) *strong,* (5) *very strong.* If the breath-force is reduced to zero, the organic result is a *pause,* the acoustic or auditory correlative of which is silence, or entire absence of sonority—speech-sound of zero intensity.

The successive portions or divisions of any utterance, depending in this way upon relative stress, may be called *stress-groups.* The elementary or simplest stress-groups, each uttered by means of a single breath-impulse, may be called *pulse-groups,* and the force with which each of these elementary groups is uttered may be called a *breath-impulse.*

The elementary or simple stress-groups called pulse-groups, as well as compound stress-groups, whether limited by pauses or merely by lesser diminutions of stress, may each contain one or more syllables.

The system, mode, or fact of application of the breath-impulse in any utterance, or in any language, may be called the *impulsation.* Every language has a system of pulse-sequences which is more or less peculiar and characteristic. Thus, the impulsation of French differs from that of English; the impulsation of one English word or sentence differs from that of another.

The audible or acoustic result or correlative of stress or breath-force is loudness or softness of speech-sound. But stress and loudness must not be confounded with one another, for stress or force is a dynamic or physical phenomenon, while the loudness or softness is a matter of sonority or sound-intensity. In the case of any given sound-quality, increased stress results in greater intensity or loudness of sound, but this is true only within certain limits; and, among speech-sounds of different kinds, the loudest sounds are often those requiring the least stress or breath-force for their production. Stress and loudness, while intimately and constantly

correlated, do not vary in any definite or exact proportion to one another. Absence of stress, or zero breath-force, produces no sound or, in other words, *silence*.

The impulsation used in singing often differs considerably from that used in ordinary speech, especially in a language such as English, in which several syllables are often uttered in one breath-impulse. In conventional singing, the general practice in such cases is to change the impulsation in such a way that, while preserving so far as possible the general outlines of the stress-groups, each syllable is nevertheless uttered with a new breath-impulse. To facilitate this style of diction, the composer should set each syllable to a separate note, on the supposition that each note implies a new breath-impulse. French and German composers usually treat this matter correctly; but English, Italian and Spanish composers either actually or apparently fall into frequent error by setting two or three syllables, or even several words, on a single note, thus making it necessary for the singer to furnish his own interpretation of the notation in each case.

The Syllable

A syllable is a noticeable and considerable prominence of sonority or loudness—a wave, as it were, of sound-intensity rising above the general level of speech.

The point of maximum loudness in a syllable is called the *crest* or *top* of the syllable.

The point of maximum loudness between two contiguous syllables is called the trough.

Syllables should not be confounded with pulse-groups. Both of these speech-units are sound-groups, and each of them may, indeed, consist of but a single speech-sound. But the syllable is a sound-group based on the *acoustic* phenomena of relative sound-intensity, sonority, or loudness; while the impulse-group is a sound-group based on the *dynamic* phenomena of relative stress or breath-force used in the production of speech. What is considered to be a single syllable is usually uttered by means of a single impulse of the breath, and is therefore also a single impulse-group. A single pulse-group may, however, and in English often does, comprise several syllables. The English word *back,* for example, contains but one syllable and one pulse-group. The word *baker* has two syllables and two pulse-groups. The word *pity,* however, while containing two syllables, is uttered by means of a single breath-impulse, and hence constitutes but a single pulse-group. The word *palatalization* has six syllables but only four pulse-groups, the first three of its syllables being uttered in one breath-impulse. In French, Italian, and Spanish, the pulse-group and the syllable are usually identical; that is, each pulse-group is typically monosyllabic and

each syllable begins with a new breath-impulse. In German, the pulse-group often has two syllables, if the vowel of the first syllable is short and the vowel of the second syllable is obscure, as in *hatte*.

THE WORD

Speech, from the point of view of its function of expressing meaning, may be divided into portions, each of which conveys a more or less definite sense, or expresses some connection or other relation of ideas. The smallest or shortest of these semantic units of speech which are capable of detached or independent use in various combinations, are called *words*. Compound units of meaning are called *compound words, phrases, clauses, sentences,* etc. Words should not be confounded with purely phonetic units of speech, whether acoustic, like syllables, or organic, like stress-groups. All these different sorts of speech-units are made up of one or more speech-sounds, and may be identical with each other so far as their constituent sounds are concerned, but they are nevertheless in general different from each other in their function or in the way in which they are separated or distinguished from each other. For example, the utterance *yes* may be said to constitute either (1) a word, (2) a sentence, (3) a syllable, or (4) a stress-group, or even all four of these sorts of speech-units at once, according as we may be considering it in the light (1) of its own independent meaning and history, (2) of its isolated use, in a given instance, to express a complete idea, (3) of its unitary waxing and waning of sound intensity or sonority, from the preceding silence into the silence which follows it, or (4) of its unitary increase and diminution of stress or breath-force from the preceding pause, or zero stress, through a certain maximum stress into the following pause.

RHYTHM

Rhythm, or the regular recurrence of a similar quality, pitch, duration, or intensity of sound, is in part due to the fact that new breath must be taken at more or less regular intervals.

A singer in selecting a song should, other things being equal, choose one in which the strong notes fall upon strongly stressed syllables, and where the pauses and cadences are those which are expressive of the thought and feeling of the text. What is the proper rhythm will not always be apparent from the text, since there are syllables with primary stress and syllables with secondary stress and accurate distinctions must be drawn between them.

Primary accent and *extra* strong stress may be indicated in phonetics by the mark ″ on the stressed syllable, and secondary accent and weaker stress by the mark ′, thus:

"I 'hope to see my 'Pilot, "face to "face,
When 'I have "crossed the 'Bar." (Tennyson.)

Or the mark ′ may be used throughout.

The Pause

Pause being an important element both in the production and understanding of speech, the proper method of phrasing must include precise and judicious use of pauses, either for taking breath, for the expression of meaning, or for both of these at the same time. Furthermore, the proper length or duration of each pause has to be considered.

A pause may or may not occur between words, accordingly as it is or is not required to make the meaning clear or forcible. A pause has the rhetorical effect of strengthening the idea in a word. Made before an important word, especially when this is pronounced with initial stress, in which case the preceding pause creates suspense which is followed by shock, produces a most telling effect. Example: "Give me liberty, or give me—death!" Succeeding an important word, especially when this has been given with extra strong stress, the pause allows time for the idea in the word to complete, as it were, its resonance, so that all the tones of the thought are comprehended. Example "Like the sun—in heaven."

Dramatic speech is greatly helped by the anticipatory pause, and intellectual reading by the reflective one. The singer can learn much from the actor, orator, and public reader in the artistic use of the pause. Among the fine readers I have heard are a few clergymen, but very few, since even a good pulpit orator is prone to read the Bible, and more particularly the Book of Common Prayer, in a conventional tone and with conventional pauses or lack of pauses confusing to the sense of the noble phrases, and utterly destructive of their phonetic beauty.

So, too, the responsive reading by the congregation is usually hurried, monotonous and meaningless. It therefore should be the function of the choir to lead in the interpretation of the text by regulating *tempi* (time in all its manifestations), pause and phrasing, emphasis and inflection.

The pause in singing may be discussed in connection with the Phrase:

The Phrase

A phrase is an utterance or collocation of words by which an idea is expressed, either completely or else partially in relation to another idea. Examples: "If a body meet a body—coming through the rye." A pause may or may not be made after a phrase in speech according to the need of breath or emphasis.

Phrasing, in singing, is the division of speech into portions so as to facilitate the production of the speech-sounds and the understanding of the language involved, one important element of the production of speech being breathing. Thus, in the above example, "If a body" may

or may not be sung as a phrase according to the taste of the singer. In this way phrases in speech are, in song, frequently subdivided and, indeed, interpolated in the text by repetition of an important word or group of words. Examples: "I—"I am He that comforteth." "Oh, ye that love the Lord—'ye that love the Lord—see that ye hate—see that ye 'hate—that ye "hate—the thing which is evil."

On the other hand, phrases in speech may receive a new arrangement in song. Example: Bruno Huhn's setting of W. E. Henley's "Invictus," "And yet the menace of the 'years "finds—and *"shall* find me—unafraid." Here stress upon "years" supplies emphasis given in speech by a reflective pause (after the word), and therefore the pause is reserved to give anticipatory emphasis to "shall."

In singing, a phrase should not end in the middle of an uncompleted expression of an idea and its relation, although composers frequently transgress this important rule by indicating rests between a preposition and its object, between an adjective or adverb and the noun or verb which it modifies, or even in the middle of a word.

The first duty of a composer in setting notes to words is to familiarize himself (1) with the meaning of the text; (2) with the rhythm as indicated by primary and secondary stresses; and (3) with the phonetic values of the speech sounds, especially those to which he should not give importance by a long or high note or stressed beat in the measure. In order to be able to understand these matters, he must have a knowledge of the technic of the diction of the language in which the text is written. Thus the German-born Handel was in error when he musically notated "He shall feed his flock" and put the stress on the auxiliary verb "shall," which is unimportant in idea, merely expressing futurity, and not determination, as emphasis would indicate. (*Cf.* the example from "Invictus.")

However, since Handel's own time, singers have rightly rendered the phrase with the stress on "He." This admirably illustrates the manner in which artists may correct composers in interpretation.

Indeed, a singer or choir should study the words of every new composition before taking up the musical score, and should supply such omissions of the composer as the breath marks (') for phrasing; time notation, and poise-mark for pause without taking breath, and stress marks.

In case of choirs this marking is the duty of the choir-master. In my own choir (of the Marble Collegiate Church, New York City) the choir-master, Mr. Richard T. Percy, marks the scores of new anthems and chants, according to his interpretation, and this marking is followed by the choir at rehearsal. Sometimes a new anthem is rehearsed for three, four or even five weeks before the first public performance. Three rehearsals are frequently given even to simple chants.

CHAPTER V

Changes in Speech-Sounds — Sound-Sequences — Vowel plus Vowel — Vowel Diphthongs—Vowel plus Consonant—Consonant plus Vowel—Consonant plus Consonant—Gliding from Consonant to Consonant.

Changes in Speech-Sounds

Speech-sounds undergo change (1) because of the variable *stress* or force of breath-impulse with which they are uttered, (2) because of their relative *position,* and consequent tendency to become alike or different from each other. When they thus become alike, or similar to each other, the change is called *assimilation.* When they become unlike the change is called *dissimilation.* A sound undergoes change also according to its *duration* and its pitch. Under the influence of these factors, singly or combined, the sounds of speech undergo changes such as obscuration, assimilation, etc. Sounds are thus also sometimes entirely lost, or, contrariwise, are brought into existence in places where there were no sounds before.

Sound-Sequences

The transition between two successive words or within the limits of a single word, or between two contiguous words, may be of four kinds, as follows: (1) vowel plus vowel, (2) vowel plus consonant, (3) consonant plus vowel, (4) consonant plus consonant.

Vowel Plus Vowel

In passing immediately from one vowel sound to another, the second vowel may be either identical in quality with the first, **aa**, or different in quality from the first, **a ɪ**.

If the second vowel sound is identical in quality with the first, it can be separated sonorically or intensively from the first vowel only through being uttered by means of a new breath-impulse, **a'a**. In the absence of such a new breath-impulse, the continued utterance of the original vowel would result merely in the production of a single long vowel, **a:**

If the second vowel sound is *different* in quality from the first, it can be separated from the first vowel only by means of a new breath-impulse on the second vowel **a'ɪ**. If, however, there is no such new breath-impulse on the second vowel, and the two vowels are therefore uttered in the same breath-impulse **a ɪ**, they become a double sound, or, as it is usually called, a (vowel) diphthong.

Vowel Diphthongs

A vowel diphthong may thus be defined as a sequence of two contiguous different vowel sounds uttered by means of a single breath-impulse and

heard as a single syllable, or portion of a syllable. Vowel diphthongs are of frequent occurrence in many languages. Among the languages with which we are chiefly concerned, French and Italian are somewhat exceptional, in that, generally speaking, they can hardly be said to possess true diphthongs.

In English and German, vowel diphthongs, especially falling diphthongs, or those whose first element is the stronger stressed and louder or more sonorous of the two, and whose second element therefore shows a falling off in sonority in contrast with the first element, are of common occurrence. In singing English and German, the first element of the diphthongs is usually prolonged.

In singing and in speaking, the separation of two vowels is oftentimes accomplished by the use not only of the above-mentioned new breath-impulse, but by the erroneous intrusion of some glottal consonant—such as the glottal stop **ʔ** as in **aʔa**; or the fricative **h**; or else by the erroneous introduction either of some tightened vowel or semi-consonant **j** or **w**, thus, *Israel* **Izrajɛl** for **Izraɛl**, or flower **fluʊwəɹ** for **flaʊəɹ**, or of some veritable consonant sound, such as in English, **r**, thus: *drawing*-room **drɛrɪŋrum** for **drɛɪŋrum**.

VOWEL PLUS CONSONANT

In passing from a final vowel of one word to an initial consonant of the next word, the consonant must not be elided; thus: "happy ome" for "happy home."

CONSONANT PLUS VOWEL

In spite of the general phonetic tendency in speech to link an intervocalic consonant to the vowel which follows it, rather than to the vowel which precedes it, the rules for conventional singing restrict the application of this practice almost entirely to consecutive sounds within the limits of a single word, and frown upon the application of it to the final sound of one word as related to the initial sound of the next. An exception to this rule, however, seems to be made in the case of French, in which language the marked tendency to link sounds between words seems even in singing, to be recognized in many instances as correct.

CONSONANT PLUS CONSONANT

In passing immediately from one consonant sound to another, the second consonant may be either identical in quality with the first, tt, dd, ff, vv, ll, mm, or different in quality from the first, dt, mp, nk, bl, etc.

If the second consonant sound is identical in quality with the first, it can be sonorically or intensively separated from the first consonant only through being uttered by means of a new breath-impulse **l'l**, **v'v**. In the

absence of such a new breath-impulse, the continued utterance of the original consonant would result merely in the production of a single long consonant, **l:**, **v:**.

Two successive consonants, may, as stated above, be identical in all respects; but usually, in actual practice, whether in speech or in singing, the articulation of neither of the two consonants thus juxtaposed is complete. In other words, the gemination of a consonant is, strictly speaking, ordinarily not a *complete* doubling, in the sense of being a repetition of two articulations which are absolutely identical from one end to the other, such as might be the case were all the organs of speech returned to their neutral position, and the breath-impulse reduced to zero, between the two articulations.

The differences between one consonant and the next may be of four classes: (1) a difference as to the presence or absence of one or more kinds of secondary action or modification, such as voicing, **dt** (*and to*); nazalization, **dn** (*did not*); palatalization, as of certain Russian consonants; labialization as, by some speakers, of **r** and **ʃ** in English; (2) a difference in the *mode* of organic action or articulation: **zd** (*his deed*), **dʒ** (*judge*), **tʃ** (*church*), **lr** (*rivalry*), **tθ** (*eighth*); (3) a difference in the place or region of articulaton, **kt** (*act*), **gd** (*bagged*); (4) a difference of the *parts,* especially the mobile organs, employed: **pf** (leap frog), **nm** (*inmost*).

Consonant Plus Consonant

Still further exemplifying Class 1, especially as regards the difference of *laryngeal* action, such as voicing or breathing, we may now consider the case of transition from a breathed consonant to its voiced mate, as **td** in *at dawn*. The tongue-gum contact common to both the **t** and the **d** should, in singing, as usually also in English speech, be held continuously, without any explosion of the **t**. A new breath-impulse and, at the same time, the advent of voice due to vibration of the vocal cords, mark the boundary line between the **t** and the **d**, and the tenure and explosion of the **d** is thus uttered.

In singing and in speaking, the separation of two successive consonants, which otherwise would be contiguous, is oftentimes accomplished by the use not only of the above-mentioned new breath-impulse on the second of the two consonants, but by the intrusion, whether erroneous or otherwise, of some vowel, or vocal glide, such as the mixed vowel **ə**, as in **ændə'tu** instead of **ænd'tu** (*and to*). In French, a similar vowel is usually intruded whenever two or three consonants would otherwise occur in uninterrupted sequence.

Exemplifying Class 2, in which the transition is from one *mode* of articulation to another, as in the case of **dl** in *kindly, and light, ladle,* the manner of utterance, in singing, is slightly different in each case. In the first case *kindly,* in which the *dly* is a weakly-stressed syllable, the complete tongue-gum closure characteristic of the **d**-tenure changes into the central contact and bilateral opening characteristic of the **l**-tenure; the **d**-tenure contact being thus released into the **l** with slight lateral explosion, the central part of the tongue-gum contact being maintained throughout the **d**-tenure, the glide, and the **l**-tenure. In the second case, *and light,* in which *light* is a strongly-stressed syllable (to which, in speech, there is a tendency to link the preceding **d**) the whole tongue-gum contact is, at the end of the **d**-tenure, released (both centrally and laterally) with a slight (central) explosion; then, with a new breath-impulse, the tongue-gum contact is resumed at the center only, and the **l** is thus uttered. The glide, or transition from the **d**-tenure into the **l**-tenure consists, in this case, (1) of the explosive release of the central part of the **d**-contact, (2) the release of the lateral portions of the **d**-contact, (3) the resumption of the central tongue-gum contact, characteristic of the **l**-tenure. Care must be taken, in both *kindly* and *and light,* not to insert a vowel after the release of the **d**, as **kɑɪndəlɪ**, **ændəlaɪt**.

In the third case, *ladle,* the last syllable is, as in the case of *kindly,* weakly-stressed; but the **l** of this weak syllable, while in *kindly* non-syllabic, is, in *ladle,* in ordinary speech, syllabic.

As, however, in singing, syllabic consonants are not employed in the languages with which we are here concerned, it is customary to convert such consonants into non-syllabic consonants by the insertion of a short obscure vowel, as, in this case, **leɪdəl**.

Exemplifying class 3, we observe the transition from one *place* or region to another, as from the velar region to the dental region, in **gd** *bragged, Bagdad, dug down;* or from the dental region to the palatal region, in **θç** *enthusiasm,* **dj** *duty,* **tj** *don't you.*

Exemplifying class 4, we see the difference of the mobile part or organ used in the articulation of the two consecutive consonants, as in the passage from bilabial **p** to the labiodental **f** in German *Pferd,* English *helpful, leapfrog,* or from the **m** to **f** in English *nymph, triumph,* or from the lingual **t** to the labial **p** in *apt,* or from **n** to **m**, in *inmost,* **l** to **m** in *almighty.*

The above classes are by no means mutually exclusive, and the factors classified by means of them are frequently intermingled and more or less necessarily confused. In singing especial care should be taken, in Classes 2, 3 and 4, to avoid the assimilation, or making alike, of the two different articulations involved in the production of the two consecutive

consonants in each case. Such assimilations, common and doubtless correct in colloquial speech, dialect, etc., are not usually permissible in conventional singing.

After the final consonant of a word, there should not be introduced any extra vowel. In other words, the final consonant should be completed or released by itself, and not by means of the addition of any off-glide or affixed phone not characteristic of the language to which it belongs.

In all cases where the sense of the text requires it, there must be a distinct sounding of each consonant. Thus, in reading the couplet from Goldsmith's "Deserted Village,"

> "The long remembered beggar was his guest,
> Whose *beard descending* swept his aged breast,"

the sentiment would be changed from the sublime to the ridiculous if the italicized phrase were to be read in slovenly fashion, without the *d,* as "beer descending."

When the changes of form in successive phonetic units have been studied according to these classifications, and the student is enabled thereby instantly to recognize degrees of physiological kinship between the units, preparation for their proper utterance is reduced to a minimum, thus ensuring distinct pronunciation while preserving the continuous flow of tone so imperative in singing "legato."

CHAPTER VI

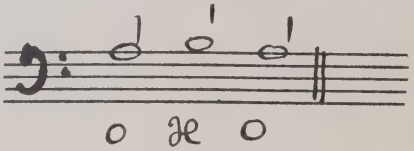
Tone

Conversation—Street-Cries—Tone-Differences between Speech and Song—Lyric and Dramatic Diction—Whom to Employ as Diction-Teacher—Speech-Tune—Musical Tune.

THE careful use of the voice in conversation affords excellent preparation for the prolonged and sustained sounds of singing. Incorrect diction in common speech creeps into singing, and the same may be said of impure tone. The speaker, especially the public speaker, should be as careful as the singer of the quality of his voice, the purity and clarity of the sounds he utters, and the harmony of their relation. Indeed, the greatest of Roman orators and rhetoricians, Cicero, declared that "what is well said must be partly sung."

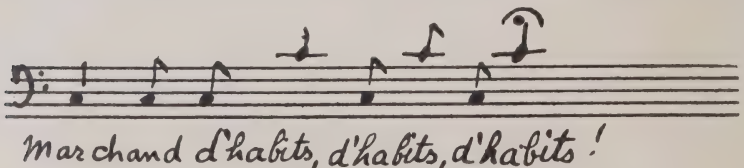
Street-Cries

Street criers have learned this by an experience extending through generations. The second-hand clothes man does not ask, in unrhythmic phrasing and the interrogative inflection of a conversational question, "Have you any cast-off clothes?", but he utters in the measure and cadence of a chant the resonant syllables in which the tone-bearing vowels alone are to be clearly distinguished: "Ole cash clo!"



Thereby he is enabled to utter the cry all day long without impairing his voice, and at the same time to reach the greatest possible number of people.

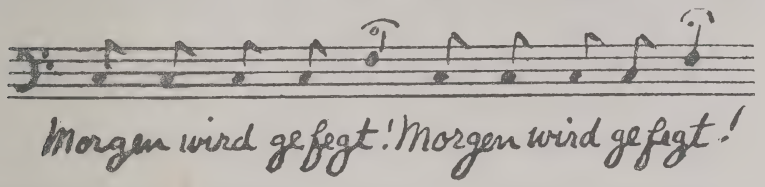
The "old clothes" man in France announces himself with an octave:



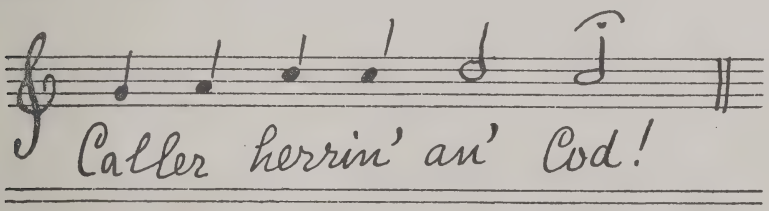
The ship's look-out similarly knows that his ringing "All's well!" will carry farther than if he barked the words in an untoned shout. The

newsboy sings "Wuxtra, wuxtra!", substituting the easily sounded "w" as initial for "ek," which he would undoubtedly attack with a glottal stop ʔ, (*coup de glotte*) and soon be too hoarse to continue.

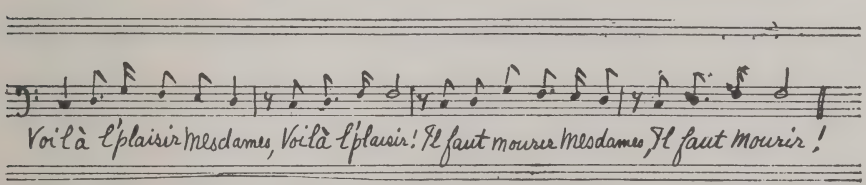
The German chimney-sweep sings his message of housecleaning thus:



The fish-wife of Edinburgh would be astonished and her Protestant heart shocked if she were told that her "cry" was a remnant of Catholic England, the tune resembling a Gregorian "Mode":



The man selling sweetmeats to the children in the Luxembourg Gardens sings this bit of Epicurean philosophy:



Take pleasure today my ladies, pleasure today! Life passes away, my ladies, passes away!

And so from these children of nature we learn a lesson as to the use and care of the voice which comes to them by instinct.

TONE-DIFFERENCES BETWEEN SPEECH AND SONG

In training the singer, sounds should never be *sung* before they can be correctly uttered with the *speaking voice*. Then these should be given with a nearer and nearer approach to the sounds which distinguish singing from speaking. The essential differences between the two kinds of utterance are to be found in the elements of sound: duration, volume, pitch, and quality or timbre.

Duration is a matter of *length* of the sound wave; *Volume* is a matter of *amplitude* of the wave; *Pitch,* of its *rate of vibration;* and *Quality,* of its *form of vibration.*

Sounds in singing are: 1, more prolonged than in speech; 2, of greater volume than in speech; 3, higher or lower in pitch; and 4, richer in overtones (resonance or sonority).

1, 2. The differences in duration and volume have already been discussed, and are obvious.

3. In speech the voice glides up and down in sounds whose pitch is not fixed by predetermined mathematical relation as in song, but is decided by the temperament and taste of the speaker, the pitch relation of the sounds being in a psychologically acceptable gamut rather than a physically exact one.

4. A sound, if it happens to be endowed with a degree of sonority by the conditions of its physiological formation, is not greatly increased in this in speaking, as it is in singing, by the addition of overtones, the subsidiary waves of tone which combine with the fundamental wave and reinforce its quality.

The greater compass of tone in the singing-voice not only enables it to fill a larger audience hall than that served by the speaking voice, but also changes the conditions of the mechanism of speech, making this more capable in the production of quality as well as of volume of sound. Indeed, the qualitative element of projectivity may take the place of volume in the quantitative sense, and cause the clear soft voice of the singer to carry farther than the much louder voice of the speaker. Orators have learned the importance of this, and, in addressing large audiences, they save their voices as well as reach their hearers by adopting ringing tones, which are virtually singing-tones.

The manner of speaking to five or six people naturally differs from that of addressing five or six thousand. In the former case, the diction of speech, like that of words (literary diction), is more familiar or intimate, and the breathing and tone are those of ordinary conversation. Before the large audience, however, the voice (including diction, breathing and tone) takes on the "grand air" of the artist, becoming more prolonged, more varied in pitch, and more resonant. It may be said in this connection, that gesture, the accompaniment of speech, also assumes a wider sweep and more dignified and artistic form.

LYRIC AND DRAMATIC DICTION

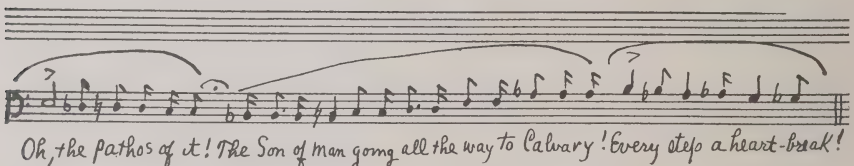
The speech sounds, however, *must not be so exaggerated as to depart essentially from their normal forms,* and so become unrecognizable. They should merely be *adapted* to the changed conditions of utterance.

This technic when applied to singing is called "Lyric Diction," and when used by the actor, "Dramatic Diction." How much it should differ from normal diction depends upon the amount of space to be filled with the voice, and upon the taste of the audience, which, of course, governs the discretion of the singer or speaker. For the consolation of the artist who desires to uphold the standard of his profession, I would say that, in my experience, the most uncultivated people are rather impressed than disconcerted by what to them are innovations in diction, since they readily perceive the purpose of the artist, and the effectiveness of his practice.

Whom to Employ as Diction Teacher

It will readily be perceived from the foregoing statements, which, I trust, are of the nature of a demonstration, that Tone is the deciding and culminating as well as, to a certain extent, the comprehensive element in the mastery of singing and dignified elocution. What kind of a teacher, therefore, should one employ for these subjects? A teacher of language (linguist, rhetorician), of sounds (phonetician), of logical expression of thought (logician), of emotive appeal (orator, clergyman), of mimicry of character (elocutionist, actor), or of the pure art of tone (such as the singing teacher)? To enumerate the kinds of teachers in this order is to answer the question. It is true that there are many conscientious instructors in languages who take great pains to teach accurate and artistic pronunciation as well as grammar, vocabulary and etymology, but, since the average pupil is satisfied with understanding the language primarily as written and secondarily as spoken, and with merely making himself understood when speaking in it, the teacher naturally makes the art of pronunciation subordinate to the scientific aspects of the subject. Rhetoricians teach art mainly in the literary sense, and only in the phonetic sense when this is contributory thereto. Phoneticians are too much occupied with the organic forms of sounds to pay attention to tonality. Indeed, they are often contemptuous of the latter, refusing to see that tone often changes the form (quality) of the sound. A lawyer is similarly too much concerned with the intellectual character of speech to attend to its æsthetic quality, and, as a rule, he adopts a set argumentative tone which is as monotonous as the literary style he employs in his briefs, where the elements of rhetorical force and beauty are sacrificed for logical clearness. The clergyman, with his mind fixed on conveying religious emotion, tends to fall into a sing-song or "holy tone," which has the same purpose and exercises on primitive natures the same hypnotic effect as a voodoo chant, but which is repellant to people with an appreciation of natural æsthetic tone. I can count on the fingers of one hand the really good clerical speakers to whom I have listened in my many years of choir singing. The three or four true

orators that I have heard in the pulpit possessed voices as fine as any that have ever delighted me from the stage or concert-platform, and the admirable manner in which they used a varied repertory of "tunes of speech" indicated that they had cultivated their fine voices by the study of tone in exactly the same way as have all great singers. I count myself very fortunate that one such voice belonged to Dr. Heber Newton, Rector of All Souls' Church, New York, of sacred memory, and another to Dr. David James Burrell, the pastor of the Marble Collegiate Church (Dutch Reformed) of New York City, where I have been the contralto in the choir for many years. Often I have analyzed and at times I have taken down in phonetic and musical notation, the speech-forms and tones in certain passages. One of these transcriptions is given, in order to explain by example the phrase "tune of speech" which I have frequently employed, and also to encourage singing teachers and others of my readers to make similar transcriptions of finely toned passages of orators whom they may hear. I would also say, in this connection, that teachers would do well to reproduce orally such passages for their pupils to take down in phonetic and musical notation. The following passage was delivered by Dr. Burrell in a sermon on a Good Friday several years ago, in which he described the ascent of our Lord to the Cross; it was an inspiring example of rhapsodized intoning:



Again every vowel has a natural pitch due to its physiological formation. (See resonator scale, pages 77 to 88, of "The Voice," by W. A. Atkin, M.D.)

SPEECH-TUNE

The difference between Speech Pitch and Musical Pitch has already been mentioned (see page 44). This, of course, fixes the fundamental difference between Speech-Tune and Musical Tune.

Speech-Tune is sometimes confounded with rhetorical Inflection of the Voice, including the rising inflection of Interrogation, the falling of Declaration, the circumflex of Irony, etc., but it is a far broader term, being æsthetic as well as intellectual in character, comprising that rise and fall of the voice and those artistic modulations which chime with the genius of the language and the temperament of the speaker. In fine, a speech-tune is a phonetic melody by which the bare meaning of words

is enforced, supplemented, and transfigured through subtle association with the artistry of the mother tongue and with the personality of the particular artist employing it.

The voice of a great actor is rich in these tunes. For example, the repertory of them possessed by Sara Bernhardt in her prime was infinite in variety, yet, though each was distinctive in its sensuous shading, all were characteristic of both the personality and the nationality of the artiste.

The assistance which a mastery of the tunes of speech gives the singer is that which is known to artists in the masterly rendering of Recitative, in which the important point is "what is *said* in singing and not what is sung in the saying."

Musical Tune

The subject of the physical nature of pitch and the æsthetic adaptation of this to the art of music, in which it forms the essential and characteristic element, is far too important for discussion in so brief a work as this. Besides, it is thoroughly treated in a number of standard works.

The teacher of elocution, as a rule, pays more attention to mimicry, an imitation of sounds as they are, rather than as they should be. This is a practice which would seem to be as old as the profession, for Aristotle inveighs against it, condemning the teachers of public speaking, known as "sophists," for trying to copy nature exactly, instead of artistically reproducing it. The æsthetic principle laid down by this, the greatest analyst of speech and thought the world has ever known, may well be taken as the motto of every artist and teacher of art. In condensed form it runs: "The purpose of art is to fulfil the *incomplete* designs of nature."

The actor of the highest grade affords a far better model of the artistic speaker than the forensic or pulpit orator or the elocutionist, and if he had the pedagogic mind which enables an artist to impart the principles of his art in other ways than by merely giving illustrations of them, he would be one of the best of teachers. But creative interpretation is the actor's forte, as it is also that of the master singer, and this differs materially from the analytical interpretation required of the teacher. Even Shakespeare, in the famous Instruction to the Players in *Hamlet,* adopts the method of exemplification, which, though excellently joined with philosophical observations on speech, does not employ the more practically helpful method of *constructive* criticism which is necessary to enable the pupil to parallel the example set him and to express concretely the principles laid down. It is easy to inveigh against "tearing a passion to tatters," but only the teacher who has acquired his knowledge by study and experience can show the untrained student how

to build up the passion in proper kind and degree. However, the passage from Shakespeare is so filled with sound principles of the art of speech, that I refer my readers to it—*Hamlet,* Act iii, scene 2. Note particularly the expressions relating to tone: "In the whirlwind of passion you must . . . . . beget a temperance that may give it *smoothness"; "split the ears* of the groundlings, who . . . . are capable of nothing but . . . *noise";* "strutted and *bellowed."*

The great masters of singing, if they have acquired their pre-eminence more by natural gifts than by hard training, fall, as educators, under the condemnation visited upon actors in like case. The best teachers, it would seem, if they do not share the opprobrium visited on critics by Lord Beaconsfield as "men who have failed in literature and art," are those in whom the more or less selfish desire to shine in creation and artistic interpretation is at least secondary to the altruistic impulse to draw out and upbuild these qualities in others by instructing and exercising them in the forms and processes of the art.

CHAPTER VII

Tone-Production

The Human Instrument—Organs of Tone Production—The Vocal Cords—The Pitch Mechanism — The Resonator — Tone Building — The Physical Ear — The Mental Ear.

The Human Instrument

THE human voice considered as an instrument is composed of three equally important parts: (1) the organs of Respiration; (2) the organs of Speech; and (3) the organs of Tone. Each of these classes is dependent on the class or classes preceding it. The respiratory organs can be separately trained, as already shown (Chap. XIII); this should be done at the very beginning of the study of speaking or singing. Then by using proper respiration, the speech-organs can, and should be trained *apart from the tone.* Voiced breath (cord action for sound waves), however, is absolutely necessary for the production of Tone. This order of dependence bears out the statement of Pacchierotti that "he who knows how to speak and how to breathe knows how to sing." For, when the organs of respiration and of speech have been trained to function properly, the organs of tone tend to take care of themselves, and this natural tendency needs only to be strengthened by practice.

The three great parts of the vocal instrument are again subdivided according to the various and numerous organs and muscles with which these are equipped. Those of respiration have already been described in chapter II on Breathing, and those of speech in chapter III on Speech Forms.

Organs of Tone-Production

For the production of tone the organs are those (1) of respiration, to supply an *air chest* and *bellows* to fill it; (2) of speech, to furnish *articulators,* and a mouth to give *form* to the impulses of breath or voice; (3) of the vocal cords in the larynx, to act as a *vibrator* to charge the breath with sound waves; (4) of the Pitch Mechanism, to *raise and lower the pitch* of the tone; (5) the Resonator, to *reinforce the sound waves* (all the cavities above the larynx with their walls and vibrating tissue act as resonators); (6) the ear, the passive, but equally essential organ, which recognizes in the sound waves *sonority* (Tone). It will be seen, therefore, that the training of the ear is of primary importance—not to produce tone, but to correct and guide the active instrument in its production, and to detect interference, either with the Vi-

brator, the Pitch Mechanism, or the Resonator. These interferences prevent the free emission of the tone and impair its quality.

THE VOCAL CORDS

The Vibrator, or initial active agent in the production of Voice (tone) is contained in the Larynx and is commonly known as the Vocal Cords.

These cords are two in number and known as right and left. As their name implies, they form a stringed instrument. Now the pitch of a string is determined in three ways: (1) its thickness; (2) its length; and (3) its tension. The vocal cords are admirably adapted for all of the three means of production.

PITCH-MECHANISM

1. The vibrating cord is changed in thickness by the intrinsic vocal muscle called thyro-arytenoideus, because it is attached to the arytenoid cartilages. The fibres lie along by the side of the vocal cords, in which many of them are inserted. In some way or another they diminish the thickness of the vibrating portion of each cord and so help to raise its pitch, and, of course, by permitting a more or less resumption of its normal size, to lower the pitch.

2. The movement of the cartilages also increases or decreases the vibrating length of the cord, aiding respectively to raise or lower the pitch of the voice.

3. The extrinsic, or crico-thyroid muscle, is attached at the rear end to the arytenoid cartilage, by the movement of which the distance between the anterior and posterior attachments of the vocal cords is increased or diminished, thereby augmenting or decreasing the tension of the cords and so raising or lowering the pitch of the voice.

The muscles of the larynx are involuntary, and so cannot be specifically acted upon by the will. They are, however, *induced* to right action by the general determination to "voice" in a particular fashion, conjoined with the proper motor action of the breath and proper pronunciation and resonance. Therefore the less attention paid to the action of the vocal cords, and the more to *breathing, pronunciation* and *resonance,* the better. With the organs of these functions working properly, general practice in singing is all that is necessary to bring into exercise the full mechanism of tone-production. The result will be rounded sonority, pure, clear and far-reaching, and, at the same time relieving all parts of the vibratory mechanism from undue strain, which leads to fatigue and voice-breaking.

THE RESONATOR

The last requirement in tone-production and the equally important, since training is there concentrated, is the Resonator. The initial sound

produced by the vocal cords is lacking in volume and quality, and this element is reinforced by a confined body or series of more or less connected bodies of air (Overtones), which vibrate at different rates of *tempi* producing overtones, but do so in harmonic unison with the original Fundamental.

This may be illustrated by vibrating a tuning fork first in free air, and then in contact with a confined body of air, such as a piano or the body of a violin. In the former case the sound is almost inaudible and very thin in tone; in the latter case it is full in volume and very sonant.

All the cavities above the larynx, the pharynx, the mouth proper, the nasal cavities, the antrum or maxillary sinus in each cheek bone, the frontal sinuses in the forehead, are each connected with the antrum by a passage called infudibulum,[1] and the ethmoidal and sphenoidal sinuses back of the nose, with similar connections, together form the Resonator of the voice.

Resonance is the result of the reinforcement of the fundamental tone by overtones vibrating at different rates from it but in harmony with it. They not only contribute to the fulness of the tone, but, being higher in pitch, also increase its carrying power.

The resonating-cavities are obviously passive, the openings thereto being controlled in part by the active speech organs, and the singer being informed of the vibration therein by the physiological sensation of resonance and his hearing of the quality of the resulting sounds.

Resonance in the remote cavities is induced by full and proper resonance in those more immediately connected with the larynx, such as the pharyngeal, the mouth, and the nasal cavities. When the sense of vibration is felt in the sinuses then the singer may rest assured that the entire vocal mechanism is working in harmony for the production of pure tone. With the habit of full resonance established, the tone becomes rich and far-reaching, and effort in singing is reduced to the minimum and made as agreeable as it is easy to the singer. Indeed, he would find it most awkward and difficult to sing in any other manner.

To sum up:

1. When the singer has command of the breath in *expiration;* and
2. of all the speech organs;

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[1]The fact of this connection was demonstrated by Thomas Fillebrown, M. D., who published the results of his investigation in a paper, "A Study of the Relation of the Frontal Sinus to the Antrum," read before the American Dental Association at Saratoga on August 5, 1895—see his book "Resonance in Singing and Speaking," page 12.

3. has the *sensation* of tone-production in the larynx; of the *proper position* of the larynx; and

4. of resonance in all the cavities;

then the combined and harmonious action of the entire mechanism of the voice cannot fail to result in clear, full, and sonorous diction.

TONE-BUILDING

Exercises for producing full tone should be moderate and brief at first, gradually extending in pitch and duration, and so developing the voice by degrees, until all the muscles of the larynx and throat are strengthened in equal measure sufficiently to produce high notes of pure tone, and to hold them without strain.

It will be realized from the foregoing that extreme and prolonged effort, which unhappily is too often employed at the beginning of voice training, is very ineffective in building up a tone, and at the same time most injurious to the voice. The more *consciously* the pupil exerts his will directly upon the larynx to produce tone, and the more faithfully he keeps up his efforts under the strain of undue muscular effort, the more he is impairing his ability as a singer. Strain is put upon the set of muscles which happens most readily to respond to the call. It does not pay to drive a willing horse to death, especially when there are others in the stable suffering for lack of exercise. That these are untrained and therefore unwilling to respond to calls upon them is no excuse for letting them remain in idleness. Hitch them up with the leader and urge them along until they obey as readily and pull as efficiently as he does, and then your coach will be sure to arrive at its destination in good time, and with all its horses in fine condition.

Many writers on singing say that the easy way is the right way to begin. Because of the plausibility of this statement it has been widely accepted, with the result that it has worked incalculable injury. At the *end of training* it will be found that the right way is the easy way, and has, indeed, become so natural that it would be extremely difficult to sing in any other manner. Yet *at the beginning* the wrong way was the easiest way, for there are ninety-nine wrong ways to do a thing to one right way, and each of the ninety-nine wrong ways is easier to do than this one, which alone requires practise.[1]

It is always easier to be wasteful than economic; and to conserve physical energy in singing and at the same time to increase results is the most difficult of accomplishments. If "ars est longa," "ars musica est longissima."

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[1]Once when I asked a pupil to sing "through her throat" and not "with it," she replied: "It is harder to do nothing than something."

The Physical Ear

The Ear is composed of three parts: (1) the outer ear; (2) the middle ear (tympanum, or drum-head, and ear-bones); and (3) the inner ear (labyrinth).

1. The function of the outer ear is to collect the sound-waves and concentrate them upon the Tympanum.

2. The tympanum is a membrane between the outer air and the inner air-chamber, which latter is supplied through the Eustachian tube, leading to the tympanum from the back part of the throat (pharyngeal cavity). The membrane operates exactly as a drum-head. Its tension is regulated by a muscle attached to that ear-bone which is next to and connected with the tympanum. The Eustachian tube is lined with a mucous membrane, so it is easy to see how a congested or catarrhal condition of either throat or ear may be communicated one to the other, and both hearing and speech be affected. In this case singing should be discontinued and speech reduced to a minimum until the disorder is removed.

The vibration of sound is communicated by the tympanum through a series of very small bones, neatly jointed together, to another membrane which is stretched across a small hole that forms the door of vibration to the Labyrinth.

3. This labyrinth (so called because of its maze of connecting membranous canals and sacs filled with and immersed in a fluid) forms the essential organ of hearing. The final extension is called the Cochlea from its shape, which is that of a snail-shell. The central canal in this contains a collection of cells, notably those known from shape as "hair-cells," which constitute the end-organ of the auditory nerve communicating with the brain, whose perception of the vibration forms Hearing. The interpretation of the perceptions of all the senses, bringing news through the body of the outer world and of the body itself, may be called Mind, or more specifically, Intelligence. Students of speech and song will now have a clearer and more forcible idea of the teacher's meaning and purpose in continually charging them to use intelligence in their work, especially that based on information received through the ear. Not until the pupil's mind has become as accurate as the teacher's in analyzing and assorting and testing sounds, is he ready to enter his professional career.

Information regarding the operation of speech organs which is received through the Eye by means of the mirror, in its simple form and in the more complex form of the Laryngoscope, is also of importance. So, too, is the intelligence, received through the muscular sense of the healthful or unhealthful condition and the proper or improper working not only of the speech organs but of the entire body. The emperor Tiberius said

that every man of thirty (not forty, as we make the proverb run) is "either a fool or a physician" in regard to his health. So every musician of adult years should be able to understand and obey the mental warnings of lassitude and fatigue of the body or any of its parts, and the jarring action of the voice mechanism, as readily as he responds to the mind's encouragement when the whole frame is filled with life and vigor, and all the speech-organs are running in full harmony.

It must not be thought (as so many writers and teachers on the voice assume) that the mechanism of the ear is perfect, and all that the pupil needs is to be instructed to use it.[1] The "hair-cells" of the cochlea are rarely found to be by nature brought up to their full capacity, and they can and should be developed by training, especially for the accurate determination of pitch. This the concentration of the mind in making nice discriminations in tone will bring about by sending thither an increased supply of nerve force. It will serve to impress on my readers the important and inspiring truth of the unity and harmony of natural law to say that the eye has similar organs in its mechanism for the analogous process of detecting color which may be developed by like concentration. Rarely if ever are hearing persons "tone-deaf," and seeing persons color-blind. At the most, their sense-perceptions in these respects are *blunted*. One of the first duties of every teacher, not only of singing but of speaking, is to test the ear of the pupil, and, when it is found to be undeveloped, to train it until at least it is accurate enough for the prosecution of his current work.

An undeveloped sense of rhythm is found in some pupils, either conjoined or not with tone-bluntness. This defect may be connected with the fluids of the inner ear, since the physiologists say that the semi-circular canal of this ear is the organ for determining balance. However, though deaf-mutes have a sideling gait, they generally possess a keen sense of rhythm, enjoying it when communicated from the piano through the hand, and dancing as correctly and enthusiastically as hearing persons. Perhaps rhythm is a general sense, most highly developed in persons of the artistic temperament. That it is a psychological one is shown by the fact that the mind imposes rhythm on a succession of sounds identical in every respect and separated by equal intervals of time. Thus the clock says monotonously, "tick, tick, tick, tick," but the mind, to comprehend the sounds, breaks them into groups, and hears them as "'tick, tock; 'tick, tock," or "'tick, 'tock, tick, 'tock," in which not only the element of stress is imposed, but also that of pitch, the inherent pitch of the vowel ɪ in "tick" being higher than the vowel ɒ in "tock."

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[1] See "Training of the Mind Ear," on page 30 of "Essentials in the Teaching of Music," by Dr. Frank Damrosch. (Schirmer, New York.)

Lack in the ear of accurate discrimination in quality is also found. There is often an unusual appreciation of quality among persons whose ears are tone-blunted, just as artists whose perception of color is not keen usually excel in drawing, their work being especially admired for beauty of form and values of shading. Contrary to prevalent impression, many fine stylists in both prose and verse have been as tone-deaf as Trilby.

Theophile Gautier, probably as great an artist in words as France has produced (for, carved from the purest stone of the language, his phrases rise from the page to the eye like cameos, and, subtly enforced with sensuous overtones, they ring in the ear like flute notes), had a most defective or undeveloped sense of pitch. It is reported that he said (the saying, however, is attributed to others), in speaking of the opera: "Of all disagreeable noises, music is the most expensive."

The singing-teacher who is also a phonetician is admirably equipped to cure deficiency in detecting pitch, by approaching the subject through the characteristic and distinctive tones which enter into the composition of speech-sounds. Such a teacher is able to diagnose defective mechanism of the voice by the ear alone, and to cure the many ailments which have their origin in the wrong use of the voice-mechanism, by simple exercises which through correct use make the voice its own healer.

Building up this ideal in the mind of the student is in music a slow, but progressive process. It naturally runs parallel to the training in detail of the organs of speech. The wise teacher will continually encourage the student with every minor achievement to note how this forms a constituent part of the ideal and so indicates his progress toward the realization of the whole.

THE MENTAL EAR

The "Mind's Ear" is a convenient figurative term for what in psychological phrase is more properly called the "Hearing Mind." Similarly, by the "Mind's Eye," we mean the "Seeing Mind." Mentality, while it has various functions, is indivisible into parts or organs. It is the Whole Mind, the Ego,—that acts in each of the several processes of sense perceptions. And in all these there is a common element, which is Vision. This is a selection and combination of sense impressions to form a concept of the thing producing them as related to an ideal already imparted to the mind. The function of the teacher is (1) to make this ideal as complete and as clear as possible, by theory and example, and (2) to train, through concentration of the student's mind, the accurate functioning of the organs of sense-perception, and through comparison with the ideal norm, the artistic composition of the impressions these transmit.

The mind of the singer or speaker must be trained to concentrate upon the sounds he desires to produce, so that he shall be able to *hear*

them mentally even before he attempts to reproduce them. The student should *listen, listen, listen* to the teacher, and then to his own reproductions, until his ear becomes not only the receiver of messages passing from the ear to the brain, and from the brain to the ear, but also controls the movements of the organs of tone and speech, until the physical and mental mechanism of the centres of hearing have been so developed in responsiveness that in the last reduction the question of training is entirely a psychological one. As in so many instances of musical education physiological deficiencies must be attacked through the mind.

Since it is a human characteristic to take delight in the exercise of faculty, the teacher, when he has trained the physical ear of his pupil to register accurately to the mental ear the forms and tones of speech and song, may safely trust him to test all auditory impressions by the norm implanted in his mind, and thereby to develop to its highest capacity the ear in the *full* sense of the term.

Dr. Frank Damrosch so well expresses my own conception of the mental ear that I quote from his interesting book, "Some Essentials of the Teaching of Music," which I take pleasure in recommending to my readers, since Dr. Damrosch writes "For the Consideration of Music Teachers, Music Students, and Parents." On page 31 he writes: "Let us call the untrained ear the passive ear; the trained, the active. The former receives and enjoys the pleasing sensations induced by the tone successions and combinations, and reacts subconsciously in emotional reflexes. The latter, however, acts instantaneously, constantly and in various directions, and it is important that the teacher should know the physical and intellectual processes in which the brain-ear, the active ear, is the centre of activity . . . . The mind-ear is the general superintendent of activities." (Page 34.) "The mind conceives a certain tune and wills that the voice shall commence on a tone of a certain pitch, quality, intensity, duration and stress. To produce this particular kind of tone the whole vocal apparatus, the lungs, the muscles surrounding them, the vocal cords, tongue, palate and maxillary muscles, the nerves governing their action, etc., etc., must be set in motion instantly and harmoniously and with such accuracy that the exact tone-effect conceived and willed by the mind is produced. It is the mind-ear previously trained to its functions which alone makes this marvelous action and reaction, this cooperation and reciprocal support possible." (Page 35.) "To secure the highest development of the directive powers of the mind-ear and the quickest and most accurate response to its demands upon the medium of expression is one of the principal tasks of the teacher." (Page 36.) "As the higher power wills each tone, the mind-ear flashes

commands to every part of the vocal apparatus, which responds instantly, provided each part of the machine has been perfectly fitted for its share of the task.

"It is this fitting process which we call *study*. The mind-ear finds that the vocal cords failed to produce exact pitch,—therefore it exacts repetition of the process until the pitch is true. The tone is not evenly sustained, hence the bellows are in need of attention; the vowels are impure and the enunciation indistinct, hence there is much to remedy in the organs of speech. . . . ."

(Page 38.) " . . . . The highest culture of the ear—the physical and the mental ear—is the *alpha* and the *omega* of music study . . . ."

CHAPTER VIII

Recitative and Chant

Forms of Devotional Expression—Recitative and Choric Chant—Music of the Jewish Temple—Chanting in the Christian Church—Plain Song.

Plain Song

MAN, savage or civilized, has been searching from time immemorial for a medium of expression by means of which to pour forth to a Supreme Being his petitions for his needs and his grateful acknowledgments of blessings received.

Other forms of devotional expression than those of speech have arisen. One of the oldest forms seems to have been descriptive dancing, in which the whole body expressed a meaning—"A dance in which every motion was a word, and rest as eloquent as motion," as Charles Kingsley happily expresses it.

Simonides, the Greek choric poet, called this choric pantomime "Dumb Music," or speaking dancing.

Recitative and Choric Chant

These rites were developed until, by union with speech, they advanced into the arts of music, poetry, and drama. The earliest form of the Greek drama consisted of recitative, that is, rhythmic monologues in sustained intonation given by the actor, and choric chants, which were outbursts of emotion from chosen representatives of his hearers. The accompaniment was simple chords which were struck with the change in the harmony. Recitative developed into dialogue in the hands of the writers of tragedy such as Æschylus, Sophocles, and Euripides, and of comedy, such as Aristophanes. In comedy in particular, the music and dancing of the chorus were made leading æsthetic features, so that such plays as "The Frogs," and "The Wasps," of Aristophanes, bear close kinship to modern light opera. Accordingly the modern specialized arts of recitation, drama, music and dancing all have a common origin in the Hellenic union, which was known as *"Mousike,"* art in general as presided over by the muses.

For a time this style of recitative, described as rhythmic monologue, was lost, but it was revived in the seventeenth century, as "recitative parlante," by an association of Florentine noblemen.

A step further in the development of Speech-tunes brings us to recitativo stromentato, which differs from the parlante in having an accompaniment which was played with the recitative, having melodic interludes as in the modern opera.

Music of the Jewish Temple

The Psalms of David and the prophecies of Isaiah were arranged in the rhythm of thought-groups and were intoned and accompanied by a harp or other instrument. These improvised speech-tunes were restricted only by the length of the syllables, and the meaning of the text. In all probability the improvising was also extended or modified by the vocal equipment and ability of the Cantor (singing priest), as it is at the present day. It therefore seems quite likely that in the course of its development chanting descended from Greek and Jew to the early Christian Church; and the present-day so-called traditional melodies of the Jewish service have retained at least a trace of their ancient origin. One of the most beautiful examples of declamatory recitative or chant intoning which I have heard was the Kadish (Prayer for the Dead) as intoned by the late Rev. Herman Goldstein, the Cantor in the old synagogue in East Fiftieth street, New York, with a wonderfully improvised accompaniment played by Mr. Will C. MacFarlane, the organist of the Temple.

Chanting in the Christian Church

The earliest history in the Christian Church is recorded in the Bible. It would seem to have continued the Hebrew practice of intoning, for St. Paul, in writing to the Ephesians, says: "Speaking to yourselves in psalms and hymns and spiritual songs, singing and making melody in your heart to the Lord." This form of rhapsodized intoning is known in the present day as recitativo parlante. The first attempt to notate these speech-tunes is attributed to St. Ambrose, Bishop of Milan, in the fourth century. He arranged four tunes from those which had descended to his time from the pagan Greeks. In their adapted form these tunes served as a musical enunciation of the sacred canticles. The "Pater Noster" and "Preface," which are still chanted in the Roman Catholic Church, are reckoned of Ambrosian origin.

Plain Song

The Plain Song, or Chanted Canticles of the Scriptures, is another priceless heritage of the Church handed down from the Greeks and Jews. St. Ambrose left four "modes" (authentic), to which Pope Gregory added four more (plagal), and these eight tunes are the foundation of the system of modern chanting. In the fourth century Pope Gregory I, called the Great, arranged and perfected these tunes (probably with additions). They were published, and a copy is said to have been chained to the altar of St. Peter's in Rome, for use as a guide in a musical school which Gregory founded. It was in this school that the famous chants which bear his name, the "Gregorian," were taught. Through the lack of

an adequate system of notation, and in spite of their publication, the Gregorian modes and chants were lost, and the existing ones cannot be said, with any degree of certainty, to be authentic.

The revival and possible restoration of the lost forms was entrusted to Palestrina, the greatest contributor to the sacred music of his time. Whether the exact forms are extant is a matter of conjecture, but a splendid study of Chant form and its peculiar musical notation may be found by the interested student in "The Vatican Plain Chant" by A. Le Maitre (Joseph Wagner, New York).

Practice in singing the old recitative of the Mozart Operas, the Oratorios of Handel, and in chanting any of the various church liturgies, is commended to students as an important help in the study of diction, to serve as an intermediary between speech and song.

A singer who is able to deliver a recitative in finished, authoritative style, may be considered an artist of the first rank.

When clear, distinct diction, pure tone, and "legato singing," with intelligent phrasing, and artistic interpretation result in *better speech* in song, and *more song* in speech, then all our utterances will again bring together the arts of æsthetic expression as they once were united in the ancient sisterhood of song.

PART II

PRAXIS

CHAPTER IX

Need of Special Exercises in Voice Training

Physiological vs. Psychological Methods of Vocal Culture—Praxis for the Student of Singing—for the Student of Elocution.

Methods of Vocal Culture

THE gulf between the physiological and psychological methods of singing and speaking is by no means as deep as many singing teachers would make it appear. While in most developed form the art of singing may be said to be highly psychological, in its preceding stages, especially the beginning, it is not particularly mental, and it is with these stages that teachers are chiefly concerned.

The voice in singing and speaking is an instrument upon which the actor and singer play, and with which they seek to impart their thoughts and emotions to others. But the performer upon the human instrument, as upon any other, cannot express himself before he has mastered its technic by diligent study and application. If only hearing and thinking a good tone could produce one, why are there so many connoisseurs and so few good singers? Surely, in that case, all the critics at least would sing! Indeed, probably most of them have tried to, and not succeeded, for Lord Beaconsfield's definition that "critics are those who have failed" in performance holds good in music as well as "in literature and art."

Take, for example, the fundamental part of our work, Respiration. A student with a narrow, sunken chest, high collar-bones, thin, scrawny neck, etc., enters the studio. What do these conditions indicate and foretell? Impaired respiration and all the pulmonary ills which will follow in its wake, unless these conditions are changed.

Can the student correct these deficiencies—strengthen his lungs, expand his chest, and fill out the hollows of his neck—by just *thinking* about them? Not at all. His teacher advises him to go to a gymnasium, or gives him special exercises for the development of his body, especially the chest and lungs. These prepare him for special exercises for breath-control in expiration which he will absolutely require when he attempts to sing a tone. The exercises for strengthening the respiratory organs and those for breath-control must not be confounded. The training for the former will result in a strong, well developed body, and for the latter

will make long phrases possible, support the tone in the extremes of the voice, and also materially affect its quality.

Nor does the psychological method alone suffice for Diction in the beginning. By giving the student special exercises for flexibility and control of the speech-organs, the teacher soon finds the student making rapid strides in the technic of singing. The non-interference of the tongue, which is the largest muscular organ of articulation, makes the free emission of the tone possible. This is accomplished by special drill for tongue-position and action in properly producing vowel and consonant sounds.

The study of these sounds all belong to the physiological side of voice-culture. The untrained singer finds it extremely difficult to pronounce isolated sounds in their lengthened form in singing. He is accustomed to that assimilation of sounds which is constantly occurring in our daily speech, and which is more or less rapid, indistinct, and defective. The tongue is not strong enough to hold the desired form on a note written to two or three beats of measure; the tip curls up or under, the middle rises, and the back seeks an escape by way of the throat; in brief, the sound is changed, and the word of which it forms a part is mispronounced. The student's own ear does not need the teacher's despairing expression to tell him that he has not produced the desired result. Shall he repeat the experiment *ad infinitum,* aided only by his ear, or shall he resort to carefully directed effort to train the tongue to take any position without sound and without thought of tone quality?—that is to say, practice exercises which are *gymnastic* for the tongue, lips, and soft palate. After the tongue has been made flexible and strong by these exercises, the attention should be turned in particular to the vowel and consonant forms. The teacher explains the position and action for all vowels and consonants, and the characteristic difference of the sounds in each of the languages in which the student expects to sing.

The foreigner, accustomed to enunciating only pure vowels, finds it difficult at first hearing to distinguish the characteristic difference between his pure vowels and the obscure forms made by a native, whose tendency is to "diphthongize" all the English vowels. These difficulties can all be overcome by exercises which train the tongue by means of the eye, the student looking in a mirror at the position of his speech organs for vowel forms. Special exercises are also invaluable for consonants. The initial test of a flexible tongue should be the tongue tip trill, for it is almost impossible for the beginner to vibrate the tongue-tip. In cases where the student has tried vainly for years to trill the sound **r**, this has been accomplished in a few moments by carefully directed effort according to the method which I here recommend.

In the production of *tone,* however, the method of teaching is more mental, or acoustically imitative, than in the drill on specific vowels and consonants. The organs of tone, in the larynx, function more or less automatically, and the singer is guided largely by his sensations. The eye and ear should also be trained to detect the specific muscle or muscles interfering with the automatic adjustment of the vocal cords, with the pitch mechanism, or with resonance. This can also be accomplished by careful observation in a mirror, by which the student may detect any visible action or interference of the muscles at the throat above or below the larynx. Thus, by both feeling, seeing and hearing the interference, the defect may easily be remedied.

When all the muscles and organs have been trained to do only what is expected of them, the physiological method gives place to the psychological. The action of the body will have become automatic, readily responding to the command of the mind, and the muscles and organs will need no longer "stand at attention." "When this is effected correctly, without interference . . . ., the result will be satisfactory, and will accurately carry out the musical conception to be expressed."[1]

Physical and mental methods may go hand in hand when the singer is ready to free his emotions and present the message of his song to his hearers by means of an instrument whose strings are always in tune, because he has mastered its technic, and can play upon it so skilfully that his soul is free to express itself without being hindered by the necessity of any *conscious* adjustment. Furthermore, he will be able to play upon it to the end; not only to the age of fifty, or sixty, when so many singers trained otherwise fail, but until no breath is left in him to sing with.

This praxis will be of value to the teacher and the student of Elocution and of Singing. To such I would advise the following brief course:

Begin the study of Diction with exercises for the Tongue; its tip, middle, back, and sides, without voice. To accomplish the movements properly, let the student practice them before a mirror. In particular, the tongue-position for vowels should be studied. When the tongue can take the required positions and hold these without effort or tension, let the student add breath, or whisper. Next, let him voice the vowel sounds, and, lastly, sing them at a given pitch and duration. The final exercise, I would say, is important for thorough training in case of the student of elocution, though of course not to the extent that it is in the case of the singing pupil. Vowel practice may either precede or fol-

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[1]Damrosch's "Essentials of the Teaching of Music." Page 66.

low consonantal. Theoretically it should precede it, but I have found in practice, that it is best for the student to understand the limitations to which pure tone may be subjected before attempting its production. This he similarly accomplishes by studying the chart of English consonants (Chart 1), marking (1) their division by means of the character of breath; and (2) the organs used in their production. After the production of vowel and consonantal sounds has been perfected separately, the student should be trained to produce them in combination and succession, and so group them into syllable, word, phrase, and sentence.

CHAPTER X

Charts

The lines indicate the tongue positions in a general way.

They are to be considered as guides and only approximately correct.

The speech sounds are affected and modified:

First—By the degree of mouth opening.

Second—By the size and condition of the speech organs and their surrounding tissues.

Third—By the sounds which precede and follow them.

English Consonants

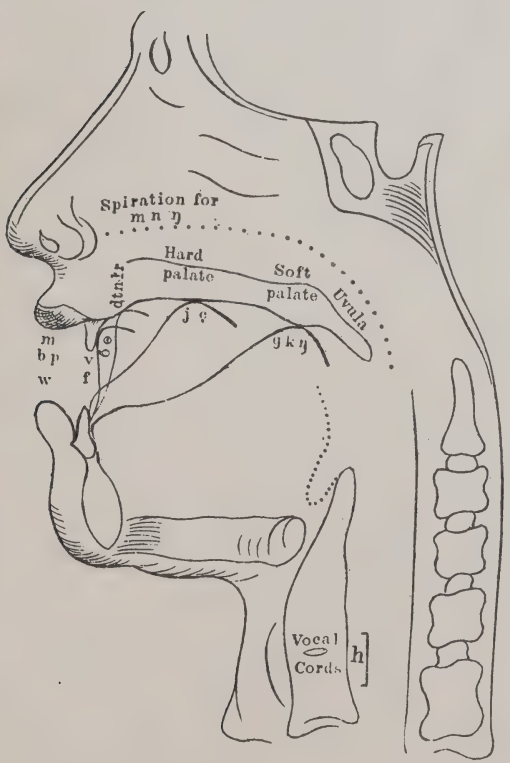


CHART NO. 1

ENGLISH CONSONANTS

Represented by the symbols of the International Phonetic Association and classified by means of the action and relative position of the speech organs.

VOICED CONSONANTS
(Vocal cords vibrating)

No. 1 Tongue tip and gums. Point trill.

d	do	added	**n**	no	**l**	love
	dine	aid		annex		silly
	dell	and		nun		full
r	(Point trill)	red		broad		her own
		write		strong		for instance
		very		green		for aye

No. 2 Tongue tip and teeth.

ð	then	heathen	thither	bathe
	thus	worthy	burthen	wreathe

No. 3 Tongue blade and teeth.

z	zeal	puzzle	music	exalt	rise
	zinc	buzzard	visit	exempt	his

No. 4 Tongue blade and teeth.

ʒ	azure	usury	**dʒ**	gem	judge	gauge
	pleasure	occasion		joy	soldier	hinge

No. 5 Middle of tongue and hard palate.

j	yes	canyon	million	duty	muse	beauty
	yoke	senior	union	use	new	duke

No. 6 Back of tongue and soft palate.

g	go	giggle	egg	**ŋ**	sing	anchor	hunger
	ghost	ragged	gag		bring	anxiety	wringing

No. 7 Upper and lower lips.

b	but	bubble	**m**	mine	mummy
	bed	bribe		mass	ham
w	west	always	won		
	one	quick	wayward		

No. 8 Upper teeth and lower lips.

v	vale	revive	delve
	vine	vivacity	wave

No. 9 Space between the vocal cords.

ɦ behold

UNVOICED CONSONANTS

(Vocal cords not vibrating)

No. 1

t	toe	tutor ɹ (Point stroke)	molar	near	air	serge	star
	tie	little	singer	mere	ear	bird	her
	trot	not	elixir	fire	ire	world	sir
			doctor	door	ore	curb	for
			murmur	sure			purr
			martyr	lyre			

No. 2

θ	thin	healthy	breath	
	thick	lengthen	bath	

No. 3

s	sun	trusting	curse	excel
	sew	glossic	class	ox

No. 4

ʃ	she	fashion	machine	hush	**tʃ**	child
	sure	tension	action	fish		church
	sugar	issue	nuptial	efficient		much

No. 5

ç	human	[or **j**]	cure	tune	dispute
	humor		curate	pew	studio

No. 6

k	kind	accord	chaos	liquor	knock
	coat	excuse	choir	queen	rack

No. 7

p	post	happy	pipe	**hr**	when	whither
	poet	open	pope		whale	whiff

No. 8

f	foe	fifty	difficult	ruff	phrase
	for	define	sufficient	cough	phone

No. 9

h	house	who	abhor	
	home	whole	unhandy	

English Vowels

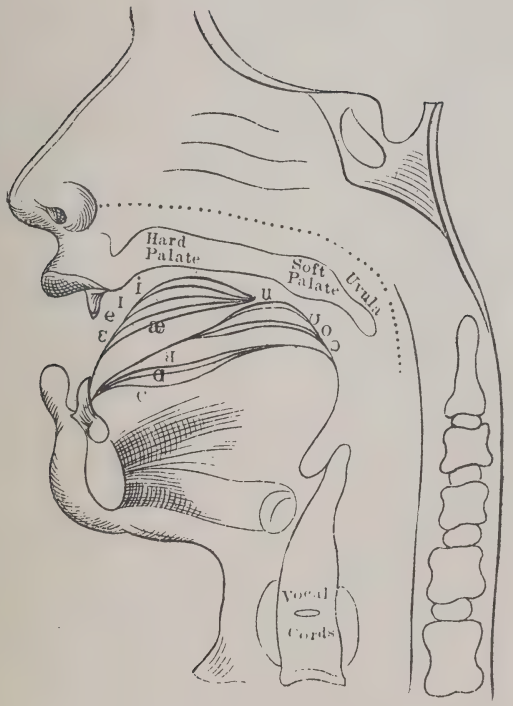


CHART NO. 2

ENGLISH VOWELS

FRONT VOWELS

No. 1										
	i	machine	fatigue							
		clean	grief							
		relieve	sea							
No. 2										
	ɪ	it	bin	gill	hymn	critic				
		sit	whim	lint	him	trim				
No. 3	ɪ	only	relieve							
		pity	defer							
		city	deceive							
No. 4	eᵀ	vacate	eᴵɪ	gate						
		vacation		vein						
		fatal		main						
		chary		gave						
		wary		eight						
No. 5	ə	abide	molar							
		against	hunger							
		again	murmur							
		sofa	monitor							
			martyr							
			fakir							
No. 6	ɛ	let	friend	ɛ:	air					
		said	head		fair					
		bent	berry		there					
No. 7	æ	at	rapid	stand						
		as	ham	anxious						
		and	hand							
No. 8	ɑ	ask	bath	ɑɪ	aisle					
		class	dance		thy					
		laugh	staff		eye					

DIPHTHONGS

eɪ	gate	ɑɪ	aisle	ɔɪ	oil	ɑʊ	house

BACK VOWELS

No. 17 **u** rule who use
tune whose feud
new view moon

No. 16 **ʊ** bull wolf sugar
pull woman book
put good

No. 15
o poetic no
overthrow sew
probate toe
fellow though
window

No. 14 **ʌ** but come
none won
tongue brother

MIXED VOWELS

No. 12 **ɐ** urge
work
fur
courteous
curt
hurt
world
worth
worm
surge

No. 13 **ɔ** door bore shore
port fort more
ɔɪ oil boy void

No. 11 **ɑ** awe vault
fawn laurel
law jaw

No. 10 **ɒ** not toss soft
broth God fog
long forest

No. 9 **ɑ** father heart sound
alms hearth bough
calm **ɑʊ** out gout
arm how renown

Italian Consonants

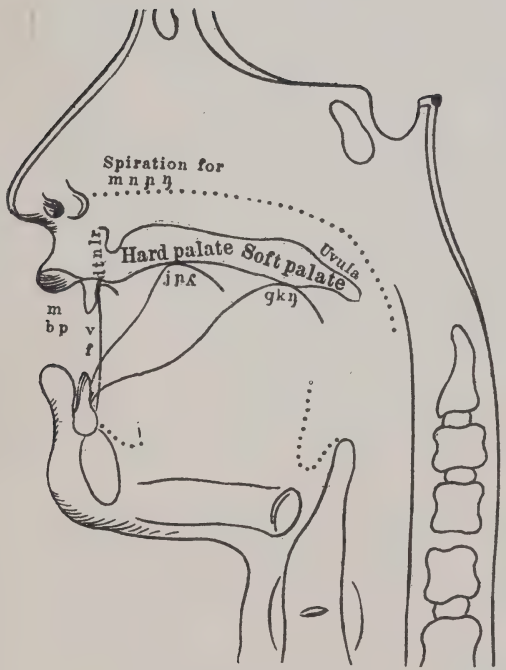


CHART NO. 3

ITALIAN CONSONANTS

VOICED CONSONANTS

(Vocal cords vibrating)

No. 1 Tongue tip and teeth.

d	due	vado	**n**	naso	penne
	dato	addio		canto	solenne
	destro	cadde		vieni	sonno
l	lega	ella	**r**	rose	brindisi
	male	bella		rosso	ferro
	volta	nel		ricchi	correre

No. 2 Tongue blade and teeth.

z	paese	sbaglio	**dz**	zero	mezzo	rozzo
	marchese	snoda		zebra	orzo	ruzzare
	francese	smarrire		zelo	pranzo	razza

No. 3 Middle of tongue and hard palate.

ʒ (dʒ)	gelo	(Eng. gem, joy)	ingegno	leggere
	genio	giarra	orgia	gioia	oggi

No. 4 Middle of tongue and hard palate.

ɲ	signor	(Eng. onion)	**ʎ**	gli	(Eng. million)
	ragno	rampogna		figlio	quegli
	sogno	mignolo		degli	voglio

No. 5 Back of tongue and soft palate.

g	grande	gloria	ghetta	fregata
	grosso	gigante	ghiado	lingua

No. 6 Upper and lower lips.

b	bocca	abile	**m**	madre	fiamma
	bada	abbozzo		mano	momento

No. 7 Upper teeth and lower lip.

v	vivo	vale	lièvе	sovvenire
	veggo	voglio	povero	ravvedere

UNVOICED CONSONANTS

(Vocal cords not vibrating)

No. 1

t	tema	tetto	battere	editto
	tazza	fatto	attore	cadetto
	tribù			

No. 2

s	sono	tassa	**ts**	azione	azza
	sera	esse		scherzo	cozzo
	senta	basso		bozza	carozza

No. 3

ʃ	scena (Eng. she)		**tʃ**	cello (Eng. child)		noci
	scelta	scettico		cenno	ciglia	croce
	scillo	conoscenza		cieca	cinque	pace
	sciolto	rescindere		circo	Cesare	

No. 5

k	casa	duca	**kŭ**	questo	**sk**	schiavo	scatola
	cui	cuculo		quello		scherzo	scolare
	che	acca		acqua		schioppo	scuola
	chi	crede					

No. 6

p	posa	sopra	frappa
	poeta	papiro	pioppo
	paura	papa	nappa

No. 7

f	fido	futuro	infelice	muffa
	forte	fuggire	ninfa	affare

Italian Vowels

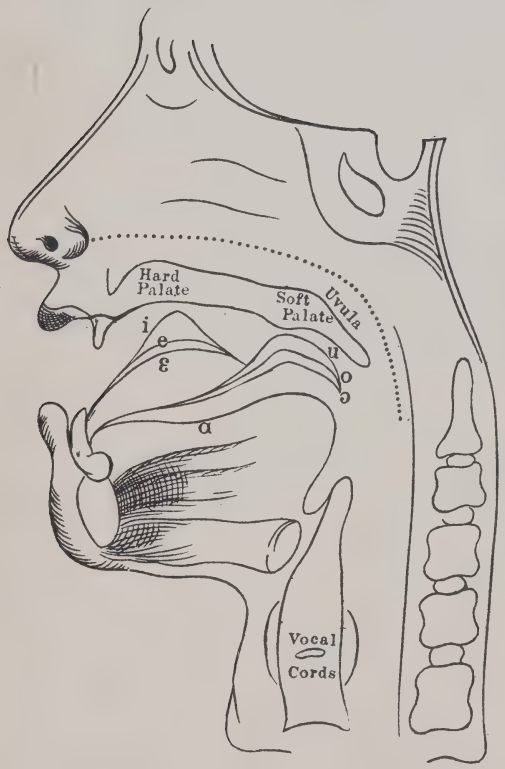


CHART NO. 4

ITALIAN VOWELS

FRONT VOWELS

No. 1

i io (Eng. machine)

mi	mai	vergini	antichi
si	mica	gentile	ricolto
di	zii	venissi	tavolina

ĭ (Semi-vowel)

ieri	noia
tiene	coiaio

No. 2

e sera (Eng. vacate)

nero	vela	avere	paese
verde	pera	mela	età
degli	meno	rena	bere

No. 3

ɛ ecco (let)

bene	mezzo	pesca	predica
viene	tiene	resto	specula
zeta	festa	terra	gemma
nerbo	era	poeta	remo

BACK VOWELS

No. 7

u una (Eng. whoever)

giù	virtù	tutti	nume
mura	bruno	spugna	ugola
puro	muso	grumo	uva
lui	pure	luna	pulpito

ŭ (semi-vowel)

uomo	quinto
tuoi	guizzo
guado	sguardo
cinque	

No. 6

o come (Eng. poetic)

oro	solo	sonno	bocca
dove	sopra	polso	dolore
nome	fiori	voi	risponda

No. 5

ɔ donna (Eng. door)

osso	nostra	posa	uomo
orzo	odio	corpo	tuono
voglio	gloria	scorta	fuoco
oca	olio	ho	buono

No. 4

ɑ padre (Eng. father)

sta	chiave	anima
mai	calamaio	alba
anno	casa	acqua
canto	bassa	aria
ancora	cassa	fare

CHART NO. 5

FRENCH CONSONANTS

VOICED CONSONANTS
(Vocal cords vibrating)

No. 1 Tongue tip and inner surface of upper teeth near gums.

d	dos	adieu	**n**	nid	plane	**l**	loup	ville
	broder	addition		dernier	canne		selon	mille
	cadeau	viande		canon	faner		valet	drôle

r	rose	serre
	ordre	carré
	chevron	noir

No. 2 Tongue blade and teeth.

z	zéro	bazar	brasier	examen
	zone	seize	mesure	exiger
	zéphir	gaz	nasal	

No. 3 Tongue blade and teeth.

ʒ jaune (Eng. azure)

gens	ange	asperge	gage	congé
gilet	neige	large	charge	forge
jeu	ajusté			jamais

No. 4 Tongue blade and teeth.

j	(Eng. yes)	**ɛj**	orteil	**œj**	orgueil	**aj**	travail
	fille		soleil		treuil		éventail
	aiguille		oreille		écureuil		corail
	sillon						

ɑj	paille	**uj**	douille	**ɲ**	mignon	**ɥ**	huit
	caille		mouiller		(Eng. onion)		(Semi-consonant)
					grogner		fuis
					baignoire		cuivre
					enseigne		suis

No. 5 Back of tongue and veil of soft palate.

g	gloire	agrafe	aveugle	langue
	guide	droguiste	orgueil	drogue

No. 6 Upper and lower lips.

b	bleu	objet	barbe	**w**	(Semi-consonant)	Louis
	bête	bobine	jambe		oui	nouer
					ouater	oindre
					oiseler	

No. 7 Upper teeth and lower lip.

v	voeu	vue	excaver	verve	suave
	voile	vapeur	envoi	esclave	vivre

UNVOICED CONSONANTS

(Vocal cords not vibrating)

No. 1

t	tasse	couteau	carotte	droite
	toute	mouton	galette	hâte
	table	obtenir	battre	nette

No. 2

s	sel	concert	massif	nuptial
	savon	brusque	russe	aristocratie
	cent	océan	dix	nation

No. 3

ʃ chaise (Eng. she)

chaud	chercher	duché	cherche
choux	cochon	couchette	bouche

No. 4

ç pied (devocalized form of **j**). Singer uses **j**

pierre	siège
tiède	officier

No. 5

k	Képi	court	sacre	**R**	uvular trill for speaking
	Kilo	carte	marquis		Singer uses tongue--tip trill
	Kiosque	calme	occasion		

No. 6

p	peur	peintre	papier	appétit	jupe
	puits	pomme	papillon	nappe	pape

No. 7

f	force	affaire	phare	agrafe
	forêt	office	phrase	oeuf

h (written in haricot, hâte, etc., but not pronounced)

CHART NO. 6

FRENCH VOWELS

FRONT VOWELS

No. 1

˜ Indicates nasal resonance.

› Indicates lip rounding.

i ici (Eng. machine)
midi gris difficile
vie hymen plier

No. 2

y une fluide futur
fumée juste
unique ramure

No. 3

e été (Eng. vacate)
pré élévation parlez
gai élégant danser

No. 4

ø peu peut
feu veut
eux deux

No. 5

ɛ très (Eng. let)
père rêve
glaive peine
dais sujet
les succès

No. 6

œ peur
oeillet
heurter
veuve
peuple

No. 7

ɛ̃ fin (Eng. ant)
simple symbole
plein Lynx
Rheims sphinx
main

No. 8

œ̃ un
lundi
parfum
aucun
humble

MIXED VOWEL

No. 9

ə de (Eng. abide)
le que recevoir
me grenade demain
se menu

BACK VOWELS

No. 16

u sou (Eng. whoever)

jour	moule	doute	soulier
choux	loup	coup	douille

No. 15

o tôt (Eng. poetic)

vos	sauce	couteau	fauche
dos	dose	notion	vôtre

No. 14

ɔ̃ bon (Eng. don't)

ombre	bond	confort	garçon
nom	raison	combat	couteau

No. 13

ɔ poche (Eng. door)

gomme	oral	corne	orange
force	corps	comme	fortune

No. 12

ɑ̃ dans (Eng. launch)

gant	sentir	printemps
chambre	longtemps	langue

No. 11

ɑ âme (Eng. father)

pas	brasier
gras	château
nation	taille

No. 10

a patte (Eng. ask)

sac	drap
brave	
cahier	
haricot	

Vowel combinations with the semi-consonants **j**, **ɥ**, **w**.

je	pied	**ɥi**	huit	**ɛje**	monnayer	**ɛj**	aie
jø	cieux	**ɥɛ**	muet	**ɛjœ**	monnayeur	**ɑjø**	aieux
jɛ	hier	**ɥœ**	rueur	**ɛjɑ̃**	payant	**ɑjœ**	aieul
jɛ̃	ancien	**ɥe**	écuyer	**ɛjɔ̃**	crayon	**ɑjɔ̃**	haillon
jɑ	cordial	**ɥɔ̃**	fuyions				
jɑ̃	science	**ɥɑ̃**	fuyant				
jɔ̃	question						

wi	jouir	**wœ**	joueur	**waje**	dévoyé	**waja**	royal
we	jouer	**wa**	poire	**wajø**	moyeu	**wajɑ̃**	voyant
wɛ	jouet	**wɑ**	bois	**wajɛ**	voyelle	**wajo**	noyaux
wɛ̃	moins	**wɑ̃**	louanger	**wajœ**	foudroyeur	**wajɔ̃**	voyons

CHART NO. 7

GERMAN CONSONANTS

VOICED CONSONANTS

(Vocal cords vibrating)

No. 1 Tongue tip and inner surface of upper teeth near gums.

d	Dom	Andacht	**n**	Name	Tanne
	das	Kladde		Knabe	Zahn
l	Land	Flasche	**r**	Rede	gerecht
	Blume	glatt		gross	Bursche
	Kleid	Fall		Trunk	Herrin
				Probe	Bär

No. 2 Tongue blade and teeth.

z	See	Muse	Rasen	Wiese
	Senf	Zinsen	Ursache	Nase

No. 3 Tongue blade and teeth.

ʒ occurs only in foreign words: Journal, etc.

No. 4 Middle of tongue and hard palate.

j	Jugend (Eng. yes)			Jung	Jucken
	Jacke	jagen	Jäger	Jammer	Major

No. 5 Back of tongue and veil of soft palate.

		or **j**	or **g**			
g	Gott	Ziege	Tage	**ŋ**	Klang	[Eng. sing]
	Gabel	Königin	Wagner		Angst wanken	singen
	gut	Berge	Flagge		jung Angel	drängen

No. 6 Upper and lower lips.

b	Bart	Silbe	Ebbe		
	Blech	Weber	Liebe		
m	Mann	Trompete	Samstag	Zimmer	Stamm
	Mond	Amtmann	räumen	wimmeln	Kamm

No. 7 Upper teeth and lower lip.

v	wo	Gewicht	
	Wehe	ewig	
	Waffe	Gewehr	bewahren

UNVOICED CONSONANTS

(Vocal cords not vibrating)

No. 1 (Voiceless d)

t	Ton	Falte	Schatten	Zeit	bald	Mond
	Tisch	Noten	Hütte	Hirt	Hund	Mund
	Tag	Mantel	Zettel	Stadt	und	Kind

No. 2

s	Institut	Kasse	aus	blass	**ts**	Zeit
	Pflaster	Sessel	Glas	Ross		Zoll

No. 3

ʃ (Eng. she)

Schale	zwischen	**ʃt**	Stroh	**ʃp**	Spur
Schiff	Zischlaut		Student		Spinne

No. 4

ç ich (Eng. human)

mich	Lerche	Schwäche	Dolch
Licht	Zeichen	Eichel	durch
Siech	Wicht	Bücher	gleich

No. 5

					(voiceless **g** or **x**)	
			(or **ç**)			
k	Krone	Takt	König	Zeugnis	Tag	Fug
	flicker	Fuchs	Berg	folgsam	Klug	Augapfel
	Trank	Hexe	borgte	Weg	log	
x	Acht	Fluch	**R** uvular **r** for speaking			
	Wache	Frucht				
	Loch	Buch				

No. 6

					(voiceless b)	
p	Post	Oper	pflücken	Kuppel	ab	Herbst
	Platz	Sopran	Pflanze	Puppe	Dieb	bleibt

No. 7

f	Fest	Kupfer	Aaffe	tief	Vater	Vogel
	Falke	Tafel	Schiffer	reif	Volk	voll

No. 8

h	Haus	Hof	Abhang	**ʔ** Glottal stop
	hohl	Horn	Vorhang	(used only for speaking)

CHART NO. 8

GERMAN VOWELS

FRONT VOWELS

No. 1

i Biene (Eng. machine)
wie Ziege hier
Ihm Liebe tief

No. 2

y Bühne Mühle
Kühn Hüter
früher Güte

No. 3

ɪ Ring (Eng. it)
Sinn mich nicht
bin wird Spinne

No. 4

ʏ Hütte gültig
Glück dünn
Küche Gürtel

No. 5

e Segel (Eng. vacate)
lesen dehnen jeder
gehen Kehle heben

No. 6

ø Höhle König
Röslein Möwe
Höhe böse

No. 7

ɛ Kern (Eng. let)
Kette Sänger
~~Säbel~~ Dächer
Bänder Stärke

No. 8

œ Götter Hölle
Völker
Rösslein

No. 9—MIXED VOWEL

ə Gedanke (Eng. abide)
bedanken
Gericht
Seide

DIPHTHONGS

ɑʊ Haus **ɑɪ** Kaiser **ɔY** euch

BACK VOWELS

No. 14

u Schule (Eng. whoever) Fuss
Flut Kur gut
Stube Husar

No. 13

ʊ Hund (Eng. bull)
Mund Hunger
Wunsch durch
Mutter Pfund

No. 12

o Hof (Eng. poetic)
Ton oben Trost
oder Strom Wohnung

No. 11

ɔ Post (Eng. door) **ɔY** euch
Kopf Nonne Wolke Häuser
Gott hoffen Spross Bäume
Kreuz

No. 10

ɑ Vater (Eng. father) **ɑʊ** Haus **ɑɪ** Kaiser
Paar Fahne dass auch Weide
Jahr acht Bass Raum zwei
Nase Atem Sand

CHART NO. 9

SPANISH CONSONANTS

VOICED CONSONANTS
(Vocal cords vibrating)

No. 1 Tongue-tip and inner surface of upper front teeth near gums.

d	andar	**n**	no	**l**	libro
	prenda		nada		luna
	esplendor		menos		clavo
	domingo		punto		gentil
r:	carro (Point-trill)				
	zorra		rosa		
	perro		caro		
	guérra		torero		

No. 2 Tongue-tip and inner surface of upper front teeth.

ð	nada (Eng. then)			
	boda	jugador	virtud	cocido

No. 3 Tongue-blade and teeth.

z	mismo	desde
(or **s**)	isla	las manos
	desnudo	dos hierros

No. 4 Middle of tongue and hard palate.

j	yelmo (Eng. yes)		**ɲ**	señor (Eng. onion)	
	yegua	hoyo		niña	peceño
	ayer	yermo		año	caña
ʎ	llamar (Eng. million)				
	ella	estrella			
	calle	silla			

No. 5 Back of tongue and soft palate.

g	grande	gallo	digno	**ŋ**	vengo (Eng. sing)
	guerra	golpe	rango		pongo manco
	gobierno				cinco blanco

No. 6 Upper and lower lips.

b	hombre	**m**	madre	**v**	obviar venir	vivo
	sombra		mas		Cuba vaca	nieve
	lumbre		amor		lobo uva	

UNVOICED CONSONANTS

(Vocal cords not vibrating)

No. 1

t	tu	tinta	titular	**ɹ**	(Point-stroke)		colgar
	temo	pinta	contacto		bravo	frio	decir
					piedra	grande	

No. 2

θ cinco (Eng. thin)

cocido	hacer	alzar	cruz	voz
calzado	cielo	fuerza	infeliz	

No. 3

s	saber	paso	confuso
	sitio	casa	silaba
	sello	ascenso	obispo

No. 4

tʃ chichón (Eng. church)

chica	corcho	charol
chacal	cuchara	muchacha

No. 5

k	casa	que	**x**	jarro	hijo	coger
	creo	quieto		oreja	jugadar	boj
	cinco	flaqueza		majo	Mexico	

No. 6

p	poco	culpa	compra
	padre	capa	española

No. 7

f	fuerte	facil	ofrecer
	fama	forma	enfermo

CHART NO. 10

SPANISH VOWELS

FRONT VOWELS

No. 1

i mio (Eng. machine)

si	chico	dia	iris
libro	dice	bicho	cortina

ĭ (semi vowel)

rubio	diccion	ciego	piedad
adios	fiador	cielos	nieve

No. 2

e$^{\text{T}}$ pecho (Eng. vacate)

conté	compré
memos	sélo
pena	cabe
saqué	decir

No. 3

ɛ terco (Eng. let)

cerro	guerra	verbo
cerner	reina	seccion

No. 4

a (Eng. ask)

nalga	amar
anima	silaba
hasta	caro

BACK VOWELS

No. 7

u una (Eng. whoever)
luna luz
puro agudo
susurro tubo

ŭ (semi vowel) fuerza cuan
hueso huello cuatro cuero

No. 6

o boda (Eng. poetic)
rosa coche esposa
noche moral cocido

No. 5

ɔ norte (Eng. door)
son voz flor
monte costa dogma

CHAPTER XI

Consonants

Consonants may be classified according to the action and relative position of the organs and by the modifications of the breath used in their production, as follows:

Class 1. *Antero-lingual Consonants*

1. Point or Tip of tongue in complete contact with the Gums of the upper front teeth, or with the teeth themselves:

Alveolar or Dental Stops **d**, **t**, **n**.

2. Point of Tongue in central contact with Gums or Teeth, Sides Open:

Alveolar or Dental Lateral **l**.

3. Point of Tongue in single or multiple contact with Gums, or with the upper front teeth:

Alveolar or Dental Point-Stroke or Point-Trill **r**, **ɹ**.

4. Point of Tongue in light contact with the inner surface of the Upper Front Teeth:

Dental Fricatives **ð**, **θ**.

5. Blade of Tongue raised toward the Gums: Fricatives **z**, **s**.

6. Blade of Tongue retracted toward the Hard Palate: Fricatives **ʒ**, **ʃ**.

Class 2. *Medio-linguo-Palatal Consonants*

1. Middle of Tongue in complete contact with the top of the Hard Palate: Palatal Nasal Stop **ɲ**.

2. Middle of Tongue in central contact with the Hard Palate. Sides Open: Medio-lingual Lateral **ʎ**.

Middle of Tongue raised toward the top of the Hard Palate: Medio-lingual Fricatives **j**, **ç**.

Class 3. *Postero-linguo-Velar Consonants*

1. Back of Tongue in complete contact with the Veil or Soft Palate: Velar Stops **g**, **k**, **ŋ**.

2. Back of Tongue raised toward the Veil or Soft Palate: Velar Fricatives **ɣ**, **x**, **R**.

Class 4. *Labial Consonants*

1. Upper and Lower Lips in contact with each other: Bilabial Stops **b**, **p**, **m**.

2. Lower Lip approximated to the Upper Lip: Bilabial Fricatives **v**, **w**, **ʰ**; Bilabial Semi-Consonant **ɥ**.

3. Lower Lip approximated to the Upper Front Teeth: Labio-dental Fricatives **v, f.**

Class 5. *Laryngeal Consonants*

1. Vocal Cords in contact with each other: Glottal Stop **ʔ**.
2. Vocal Cords approximated to each other: Glottal Fricative **h.**

CLASS 1. ANTERO-LINGUAL CONSONANTS

Sub-Class 1. *Alveolar or Dental Stop Consonants*

Alveolar Voiced Stop **d** as in *deed* **deed.**

The sound of a typical English **d** is produced (1) by raising the point or tip of the tongue to the alveoli or gums of the upper front teeth so as to form a complete closure or stoppage therewith, while the veil or soft palate is raised against the rear wall of the pharynx so as to close the opening from the pharynx into the nose-passages; (2) by holding the organs briefly in the position thus attained; (3) by forcing the breath outward from behind the linguo-alveolar contact so as to explode or break through the stoppage.

In the production of a **d** the contact of the organs and also their subsequent separation or release, varies according to the position necessarily assumed by the organs of speech in making the sounds which immediately precede and follow the **d**. The release of the organs or the opening of the **d** stoppage, may be (1) oral, (2) nasal. If the release is oral, it may be either (1) central or (2) lateral. If a vowel, or an unnasalized fricative consonant, or a pause follows, as in *do, adds, odd,* the **d** has central oral release. If the lateral consonant **l** follows, as in *fiddle,* the **d** has lateral oral release. If a nasal consonant such as in *sudden,* the **d** has nasal release. In singing **d**, the lateral oral and the nasal modes of release are to be avoided, by means of the interpolation of the obscure or mixed vowel **ə**, thus rendering *fiddle* as **'fɪdəl**, rather than **'fɪdl**, and *sudden* as **'sʌdən**, rather than **'sʌdn**. The release of a final **d** into the obscure vowel as in *and* **ændə** instead of **ænd**, should be avoided. **d** is the first sound in the affricate represented by *g* in *gem* and by *j* in *joy* **dʒɛm, dʒɔɪ**. Prepausal **d** after a short stressed vowel is, in English, often long as in *he did!* **hi dɪd :**; in speaking, final **d** is sometimes not exploded at all.

Examples for English: did, deed, dead, added, aid,
dune, sudden, muddle, made
addition, solid, dude,
dʒ edge, judge, jaw, jelly,
hinge, gibe, soldier, jury,
huge, cage, June, joy.

In Italian, French, German and Spanish the **d**-sound is produced in the same way as the ordinary English **d**, except that the tongue-tip contact in these languages is further front, and is consequently on, or near the inner surface of the upper front teeth instead of on the gums; thus making it a dental stop instead of an alveolar (gums) stop such as the English. Even in English, **d** tends to become dental when followed by the dental **ð** or **θ**, as in *breadth, width*. In Italian, French and German the **d** has a greater tendency to be voiced throughout than it has in English. **d** is the first sound in the Italian affricates represented by *z* as in *zero* **'dzɛroᵀ**, *mezzo* **'mɛd:zoᵀ** and by *g* in *gemma* **'dʒɛm:ɑ**.

Examples for Italian: due, modo, daddovero, **dʒ** gelo, orgia, della, edera, addio, genio, ingegno, dato, dodici, cadde, già, legge.

In French the letter *d* is often silent, as in *marchand, bond, hazard, nid, chaud, froid, grand, nord, tard, rond, vieillard,* etc.

The linking of a final *d* often takes place when the following word begins with a vowel or, in certain cases, with a silent *h*. When thus linked, the sound of the *d* is **t**, thus: pied à terre, **pje-tɑ 'tɛ:r**, *un grand homme,* **œ̃ grɑ̃-'tɔm**. Final *d* preceded by r is silent, and the linking is made with *r,* thus: *bord à bord* **bɔ-rɑ 'bɔr**. Prepausal French **d**, after a short stressed vowel, is often long, as in *mode* **mɔd:**.

In German, final consonants are voiceless, and final *d* is pronounced **t**, as in *Hund,* **hʊnt** *Land,* **lant**.

Examples for German: das, dicht, Dorn, Andacht, Wunder.

In Spanish, **d** occurs

(1) Postpausal, or after a complete pause, as at the beginning of a paragraph or sentence, and

(2) after a cognate stop or lateral, as in *candil, prenda, toldo, espalda.* nomic *d,* when either intervocalic or final, is pronounced **ð**, as in *nada* **nɑðɑ** *edad* **e'ðɑð**.

The purely oral stops **d**, **t**, **b**, **p**, **g**, **k**, are really double stops, because, in their production, there is not only a stoppage of the breath-exit through the mouth-passage (by the tongue or by the lips), but also a stoppage of the breath-exit through the nose-passage (by the raising of the veil or soft palate). If these stops, especially the voiced **d**, **b**, **g**, are nasalized (by the lowering of the veil), only the stoppage of the exit through the mouth-passage remains, and the sounds become respectively the single stops **n**, **m**, **ŋ**.

The singer, when attempting simply to impart extra stress or duration to **d**, **b**, or **g**, should avoid lowering the veil and thus nasalizing the on-glide of these sounds into **n**, **m**, **ŋ**, and pronouncing *day* **ndeᵀɪ**, *but*

mbʌt, *god* **ŋgɐd**, instead of **deᵀɪ**, **bʌt**, **gɐd**. Knowledge of such facts as these, is important in correcting speech-defects due to inactive or sluggish speech-organs. Even a child will respond to training by appropriate remedial exercises.

Breathed Stop **t** as in *ten* **tɛn**. In English, the breathed stop **t** is produced in about the same way as its voiced mate **d**, except that the vocal cords do not vibrate. The lingual action in producing a typical **t** is more energetic than in **d**, possibly because no energy has at the same time to be absorbed in vibrating the vocal cords. The singer should be careful to make the explosion or off-glide of the *t*-tenure with the *local breath,* and not to allow the off-glide to terminate into either the laryngeal fricative **h**, nor add the vowel **ə** to a final exploded **t**, as in *aught,* which should be pronounced **c:t** rather than **c:th** or **c:tə**.

Final *ed* often represents **t**, as in *brushed, looked,* etc. **t** occurs as the affricate **tʃ**, as in *charm, catch, church.* **t** is silent in *castle, hasten, often,* etc. English **t** often has no audible on-glide, as in *act, apt, act two,* and when final, **t** is often long, or is not exploded at all.

Examples for English: taught, attempt, tight,
task, kettle, match,
trunk, kitten, watch,
tight, little, which,
match, bottle, much.

In Italian, French, German and Spanish, **t** is dental and not alveolar as evidently in English.

In Italian and French a **t** is exploded by a slight local fricative glide, instead of a glottal fricative glide as tends to be the case in English and German before a strongly stressed vowel. Singing-teachers recognize this fact, and say "the breath comes through" noticeably in English and German prevocalic stressed *t, k, p,* whereas in Italian, French and Spanish it does not. Italian *z, zz* often represent **ts**, **t:s**, as in *zia, prezzo,* and *ce, ci, cci,* represent **tʃ**, **t:ʃ**, as in *cero* **tʃɛroᵀ**, *cica* **tʃikɑ**, *facce* **ˈfɑt:ʃeᵀ**.

In Italian, **t** and **d**, like many other consonants, are often long, whether written doubled or not, as in *a tutto* **ɑ ˈt:ut:oᵀ**, *a Dio* **ɑ ˈd:ioᵀ**.

Examples for Italian: tema, tetto, tutto, battere, cadetto,
tale, tribù tuo,
ts azione, brozza, carrozza,
scherzo, forza, azza,
tʃ cero, noci,
cenno, croce,
cica, pace,

In French, **t** is often silent, as in *comment, et, point, but, rat, habit, respect, nuit, banquet,* etc. In the word endings *tie, tier, tieux, tiel, tien, tion, tial,* **t** is usually sounded **s**.

Examples for French: temps, couteau, patte, exact, correct, abrupt, tasse, obtenir, carotte, strict, compact, sept, hostie, apt, dot, direct, net, Christ, ouest, est (east).

Examples for German: Tag, Falte, Schatten, Punkt, Zeit, Hütte.

Examples for Spanish: tema, cuatro, tu, tinta, pinta, techo.

Alveolar Nasal Voiced Stop **n** as in *none* **nʌn**. For the English nasal stop **n**, the tongue contact is about the same as for **d** and **t**. The veil or soft palate is dropped, the sound thus receiving nasal resonance. The breath normally finds an exit through the nose, thus making the sound a continuant. In English speech an ordinary voiced **n** may be syllabic, that is to say, it may, because of its sonorousness, constitute or contain the crest or apex of a syllable, or perform the function usually performed by a vowel, as in *kitten* **kɪtn**, *cotton* **kɒtn**, *garden* **gɑːɹdn**. The singer, in such a case, should interpolate the obscure or mixed vowel **ə** before the **n**, and let the vowel carry the tone, giving the syllable thus formed the shortest possible duration or time-value. Under no circumstances should a clear vowel such as **ɛ**, **ɵ**, **ʌ**, be substituted for the **ə** in these cases.

For dn in ridden sing **ˈrɪdən**
For vn in proven sing **ˈpruvən**
For zn in season sing **ˈsizən**
For fn in roughen sing **ˈrʌfən**
For kn in reckon sing **ˈrɛkən**
For pn in open sing **ˈopən**
For tn in mitten sing **ˈmɪtən**
For ln in swollen sing **ˈswolən**
For sn in hasten sing **ˈheˈɪsən**
For fn in often sing **ˈɵfən**
For *ng* in sing, *n* in *bank* see **ŋ**.

Examples for English: need, noon, nine, knight, inn, feign, night, nun, neigh, know, dinner, not, money, mountain, knee, gnaw.

In Italian, French, German and Spanish, **n** is produced in the same way as English **n**, except that the tongue-contact, instead of being at the gums, is at or near the *inner surface of the upper front teeth.*

In Italian, **n** under strong stress is long before another consonant as in *mente* **men:teᵀ**, and is often long whether written doubled or not, as in *è nulla* **ɛ 'n:ul:ɑ**.

In ordinary modern French, *n* is silent after a nasal vowel in the same syllable, as in *dans, bon, vin pain, tente, lynx, un.* The vowel is nasalized, the letter merely serving as a sign of this nasality. If, however, the *n* is the initial letter of a following syllable it is pronounced, as in *inutile* **iny'til**, *inhumain,* **iny'mɛ̃**. A vowel followed by *nn* is not nasalized as in *canne* **kan**, *année* **a'ne**. If the *n* is followed by a word beginning with a vowel, it is linked to the vowel and pronounced as *n,* the vowel retaining its nasal quality, as in *un enfant* **œ̃-'nɑ̃fɑ̃**.

For *gn see* **ɲ**.

Examples for French: nid, menu, âne. bonne, hymen,
noix, ennemi, canne, lune, innocence,
noir, linon, donner, reine, annuel.

Examples for German: Name, Knabe, Zahn,
nein, Gnade, Tanne,
nun, schnarchen,
nie.

For *n* in *Dank, singen,* etc., see **ŋ**.

In Spanish, while the letter *n* ordinarily represents the *n*-sound, as in *nada, tinta, n* before **g** or **k** is often pronounced **ŋ**, as in *sangre* **'saŋgɛ**, *cinco* **'θiŋkɔ**; *n* before *v* or *f* is often labiodental, as in *confair* **kɔmfiaɹ**, and *n* before *ch* resembles **ɲ**. The letter *m* at the end of a word is ordinarily pronounced as if it were an *n,* as in *album* **'alʊun**. For *ñ* as in *año* **aɲɔ** see **ɲ**.

Examples for Spanish: noche, una, carne,
norte, himno, sonora,
menos, punto, nada,

Sub-Class 2. *Alveolar or Dental Lateral Consonants*

The alveolar or point-gum voiced lateral **l**, of English, as in *lull* **lʌl**, is produced by raising the point or top of the tongue so as to form a central contact with the alveoli or gums of the upper front teeth similar to the closure for **d** and **t**, except that instead of there being complete closure, there is an opening or breath-exit left on each side of the tongue and the upper side teeth. The vocal cords vibrate. The release or off-glide of the **l** varies according to the position necessarily assumed by the tongue and other organs in producing the sound which follows.

In English, the general tendency is toward a hollow (or dull-sounding) **l**, rather than a flat (or clear-sounding) **l**. The typical English **l** is produced with the middle of the tongue low, or hollowed, while the back part of the tongue is raised toward the veil or soft palate, or the position characteristic of the vowel **u**. In singing, the flat **l** is to be recommended in all cases.

The English **l**, having a greater inherent sonority or loudness than any other English consonant except **r**, is, like **n**, often syllabic.

If a vowel, or an unnasalized fricative consonant, or a pause follows the **l**, as in *low, bells, call,* the **l** has central oral release. In singing, the velo-nasal release of **l** into **n** is avoided by means of the interpolation of the obscure or mixed vowel **ə**, thus: *swollen* '**swoləⁿ**. The release of a final **l** into an obscure vowel, as in *bell* **bɛlə**, should be avoided. The vocal cords should, in fact, cease to vibrate just before the separation of the tongue from the gums. The release of **l** directly into **m**, is however, correct singing usage, as in *elm, realm, helm.* The singer should here guard against the interpolation of the obscure vowel, and should sing **ɛlm** and not **ɛləm.** The release of **l** into final consonants as in *help, golf, elf, silk,* should be accompanied with the same technic as described for *m.* The letter *l* is silent in *calm, balm, calf, half, could, would, should,* etc.

Examples for English: lull, luck, slate, child, kiln,
lawn, blow, click, cold, fulfill,
live, glove, help, slate, pulpit,
let, play, film, drill, little,
coddle, ladle, fertile,

The Italian, French, German and Spanish **l** is, like the **n** of these languages, dental instead of alveolar, and is not postero-lingualized, hollow, or dull, but flat and clear, sounding rather like **i** than **u**. In Italian **l** is often geminated or doubled and receives the time value of two sounds though enunciated as one sound as in *bella* '**bɛl:ɑ**. Under strong stress **l** is long before another consonant, as in *molto,* '**mol:toᵀ**, *a lei* **ɑ l:ɛi**.

Italian Examples: bel, lega, ella, piccolo,
nel, male, libro, lilla,

For Italian *gl* see **ʎ**.

In French, prepausal or final **l** as in *humble, table,* being breathed and not voiced, is not syllabic after a consonant, as in English.

In singing, such a final **l** is not only always voiced throughout, but sometimes even has a short **ə** after it, thus: *humble,* '**œ̃blə**, '**tablə**.

The singer should be careful not to stress this sound or give it undue time-value, and the composer should (1) avoid setting such a syllable to a high note, (2) avoid writing it to an accented part of the measure, and (3)

give it only the shortest possible time-value, especially at the end of a word or sentence, as: *elle est belle* **ɛ-lɛ 'bɛlə**, rather than **ɛ-lɛ bɛ'lə**. Final **l** after a short vowel which is strongly stressed is often long, as in *mal, belle,* etc. In rapid speech **l** is often elided, thus: *table,* **tab**. *l* is silent in gentil, fusil, chenil, sourcil, gril, fils, etc.

Examples for French: loup, lait, paletôt, mortelle, million, lit, pluie, palme, nouvelle, querelle, lilac, selon, calme, village, illisible, billion remballer, pelle, col, bal, fol, sel, avril, profit,

For *"l* mouillee," see **j**.

Examples for German: Land, Kleid, Zeile, voll, Lob, Blume, Hölle, Quelle, Leid, Stellung, Zoll,

In Spanish, *l* before *ch* resembles **ʎ** as in *colcha.*

For *ll* as in *llano, caballo,* see **ʎ**.

Examples for Spanish: lateral, luna, libro, gentil, calvo, azul, alba.

SUB-CLASS 3. POINT-TRILL AND POINT-STROKE CONSONANTS **r**, **ɹ**.

The Point-Trill **r** is produced by raising the point or tip of the tongue toward the gums of the upper front teeth, and, while allowing the tongue-tip to remain in a somewhat lax and elastic condition, so forcing the breath out through the tip into a tremulation, vibration, or roll, against or near the gums. This trilled or rolled **r** is thus a sort of repeated or multiple form of the single stroke or flap **ɹ**.

In English speech, the typical **r**-sound is a sonorous consonant produced by raising the anterior or forepart of the tongue, with the tip inverted or turned upward and backward, toward the hard palate. This consonant, when coming just after a **d** or a **t** in the same syllable as in *dry, try,* tends to become more fricative, and is like the fricative **r**-sound often heard in Castilian colloquial Spanish. The letter *r* is, especially in certain localities and types, of English, French, and German speech, often silent, or, in English and German, especially when followed by another consonant or by a pause, pronounced as a vowel, usually of obscure or mixed quality.

In some forms of English, such as Scotch English, the point-trill **r** is, however, in general use. This rolled lingual **r** is often used in standard English in public speaking, on the dramatic stage, and when it occurs before the vowel, it is the best **r**-sound for singing.

In singing, the point-trill **r** is used in English as follows:

(1) Initial, as in *red, rose, write;*

(2) Preceded by one or two consonants in the same syllable, *broad, thrust, strength, pray;*

(3) Intervocalic, *American, very, hurry, carry;*

(4) At the end of a word, before an initial vowel in the next word, as in *her own, for instance.* In the last case, the **r**-sound is not linked to the following word, but remains as a final sound of the first word, the new breath-impulse beginning with the initial vowel of the next word.

The **r**-sound in Italian is the Point-trill **r**. The doubled *rr* has a prolonged trill as in *carro,* **'kar:oᵀ**.

Examples for Italian: rosa, brindisi, carro, errante,
presto, minore, ferro, errore,
grido, nera, correre, arrivare.

French *r* may be either the tongue-point trill, just described, or a uvular fricative. In singing, in oratory, and on the stage, the point-trill is preferable. The doubled *rr* has sometimes a more prolonged trill than the single *r*.

In French speech, final *r* is not voiced, and hence not syllabic, after a consonant. In rapid speech, such an **r** is often elided, thus: *quatre* **'kat**, for **katr**. In singing such a syllable, the *r* is voiced throughout, and is usually followed by a short **ə**, thus: **'katrə**. The singer should be careful not to stress this sound, and the composer should (1) avoid setting such a syllable to a high note, (2) avoid writing it to a stressed part of the measure, and (3) give it only the shortest possible time-value. The *r* in final French *er,* unless a vowel follows in the next word, is usually silent, as in *parler, aimer,* etc.; but in exceptional cases, it is pronounced, as in *cuiller,* **kɥijɛ:r**, *enfer, hiver, amer, dessert,* etc.

For uvular *r* see **R**.

Examples for French: rose, courant, carreau,
robe, bureau, serre,
rang, chevron, mur,
riche, ordre, noir,

The German *r*-sound is somewhat like the French. The tongue-point trill **r**, common in ordinary speech in many parts of Germany, is apparently giving way before the uvular *r*-sounds, either rolled or fricative, or the vocalic substitutes for the *r*-sounds. The tongue-point trill is used exclusively in artistic singing, and is generally employed on the dramatic stage. An English-speaking person, when singing in German, should be careful neither to change a close vowel before an **r** into a more open vowel, nor to intrude just before the **r** an extra vowel or vocalic glide of any sort, on analogy with English usage. For example, German *dir* should be rendered **di:r** rather than **dɪ:r** or **dɪ:ər** or the like.

Examples for German: Rohr, braun, ihr,
Rede, Trunk, Bär,
Rahm, Probe, Herr.

In Spanish, the letter *r* represents (1) a long point-trill **r:**, (2) a short point-trill **r**, (3) a point-stroke or flap **ɹ**, (4) a (long or short) point-gum fricative somewhat like that of *dry, dread,* in English speech. For our purposes the last-named, or fricative *r*-sound, may be ignored. The singer is advised to use a point-trill **r**, long or short, according to the following rules:

(1) Use the long trill **r:** for *rr*: *carro, tierra, torre.*

(2) Use the short trill **r** for *r* whenever it is initial: *rosa, raro.*

(3) Use the short trill **r** for *r* whenever it occurs between two vowels: *caro, torero.*

(4) Use the trill **r** for *r* whenever it occurs before another consonant: *largo, curso.*

(5) Use the point-stroke or flap **ɹ** for *r* whenever it occurs after a consonant in the same syllable: *bravo, siempre.*

(6) Use the point-stroke or flap **ɹ** for *r* whenever it occurs final and is followed by a pause: *decir, vivir.*

The singer should distinguish *carro* **'kar:ɔ** (cart), and *caro* **'karɔ** (precious) by the length of the trill.

Examples for Spanish:

r:	(a)	carro,	perro,	tierra,	
		torre,	guerra,	pizarra,	
		carrera,	cerro,	jarro,	
	(b)	rosa,	raro,		
		rubio,	ridiculo,		
		rueda,	raton,		
	(c)	caro,	torero,	aurora,	
		oro,	dinero,	verano,	
		claro,	banquero,		
		pereza,	marinero,		
r	(d)	largo,	curso,	fuerza,	
		virtud,	surgir,	burla,	
		torno,	carta,	tarde,	
ɹ	(a)	bravo,	cuadro,	sangre,	
		tropel,	siempre,	frio,	
		hombre,	telegrama,	grande,	
ɹ	(b)	alzar,	alucinar	decir,	colgar,
		vivir,	llamar,	auxiliar,	sabor.

Point-stroke ɹ is produced by a single stroke flap of the point of the tongue against the alveoli or gums of the upper front teeth. In British-English it is often used for **r** where this letter comes between two vowels, as in *very;* but this stroke is in more frequent use in England than in America, except in singing, where it is used as follows:

1. In the body of a word followed by one or two consonants: *word, learn, first, hard, urge.*

2. In a weakly-stressed syllable: *briar, singer, fakir, doctor, martyr, murmur.*

3. Following a long vowel or a diphthong: *air, ear, mire, door, sure, lyre.*

4. Following a vowel in a strongly-stressed syllable: *far, fur, nor, guerdon, forty, morning, former, quarter, piercing.*

Initial and postpausal *r* in speech is usually the point stroke ɹ. Final and prepausal *r* is usually the vowel ə.

While the student of singing, the actor, and the orator need to acquire only the ordinary point trill **r** and point stroke ɹ, he may, for mimetic effects find occasion to prolong the point-trill, or he may in special circumstances use either the weak ə-glide or various other kinds of *r*-sounds.

In ordinary English-speech, the letter *r* is, when pronounced at all, usually either an inverted tongue-point sonorant, produced by turning the tongue-tip upward and backward toward the top or vault of the hard palate, as heard in American-English *red, great, crate, heart,* or else an inverted tongue-point fricative, as in *dry, try.* Though typically voiced, this *r*-sound is often partly breathed or voiceless. The sound varies somewhat in different localities, and the English letter *r* is often wholly silent when followed (1) by a consonant, as in *hard, far down;* (2) when final, as in *ear, air, door, mire, star, far, for.* The vowel itself is, in such cases, by many persons apicalized or modified by retroflexion or inversion of the tongue-tip. The singer is advised not to give postvocalic English **r** sounds too much prominence by trilling or rolling them unduly.

Examples for English:

Point-trill: **r**	reed,	breed,	dream,	freak,	greed,	glory,
	rill,	brush,	drink,	frill,	grill,	story,
	rail,	brig,	drake,	frame,	gray,	oral,
	red,	breath,	dress,	fresh,	grant,	apron,
	rasp,	brat,	drank,	frump,	grime,	library,
	raw,	broad,	drunk,	France,	group,	
	rock,	broom,	drove,	fraud,	groin,	
	row,	broil,	drum,	froth,	garret,	

creek, tree, American,
crib, trim, hurry,
crane, trace, rarity,
cram, tram, arrive,
cry, try, around,
crush, trust, arise,
croak, trolley, berry.
carry,

Point-stroke: ɹ fir, gird, here, care, lark, sard,
fourth, garb, herd, car, lear, serge,
fear, gore, heard, card, learn, sour,
fare, gorge, hare, curt, lair, visor,
fern, hark, skirt, lurch,
fire, hire, lyre,
for, hurl, mirth,
furl, hoard, more,
fury, horse, store,
pore,
pour,
fore,

turn, word,
tart, work,
torch, worth,
term, worthy,
there, worm.
thorn,
thirty,
thirst,
tired,
hired,
wired,

Sub-Class 4. *Dental Fricative Consonants.*

1. Point-Teeth Voiced Fricative **ð** as in *then* **ðɛn**. The voiced dental fricative **ð**, represented in current English spelling by *th,* as in *then,* is produced by raising the tip of the tongue towards the inner surface of the upper front teeth. The vocal cords vibrate. The tip of the tongue should not protrude between the teeth.

Examples for English: thee, breathed, sheathe, with,
they, further, wreathe, bathe,
this, father, other, youths,
thus, either, either, baths,

In Spanish, the letter *d* represents the fricative **ð**, except when initial (postpausal) as in *donde,* or after *n,* or *l,* as in *candil, falda.*

Final **ð** is often very weak, and sometimes omitted entirely, as in *usted, Madrid, verdad.*

Examples for Spanish: crudo, monda, callad,
edad, adjetivo,
que desde,
Madre de Dios,

ð does not occur in Italian, French or German.

2. *Point-Teeth Breathed Fricative* **θ** as in *thin* **θɪn**.

The English breathed dental fricative **θ**, usually spelled *th,* is produced about the same way as its voiced mate **ð**, but without voice.

Examples for English: think, thick, thirtieth, breadth,
throng, thorn, thirteenth,
thrust, three, eighth,
thigh, thumb, width,

θ occurs in Spanish, where it is usually represented by the letter *z* or *c.*

Examples for Spanish: luz, voz, cielo,
zorra, zurdo, nación,
onza, vez, cinco,
razon, ceniza, conciencia,

Sub-Class 5. *Blade-Gums Consonants* **z, s.**

Blade-Gums Voiced Fricative **z**, as in *zone* **zon**. The English voiced fricative **z** is produced by raising the blade, (the part of the tongue just back of the point or tip), toward the gums of the upper front teeth, the sides of the tongue meanwhile touching the inner surface of the upper teeth at the sides. The tongue should not protrude between or touch the edges of the front teeth. A small central channel, or rill, is thus formed, and the breath, passing outward through this channel makes its exit between the upper and lower front teeth with a sibilant or buzzing sound. In English the tip of the tongue is raised toward the upper gums. The French mode of articulation, in which the tip rests against the inner surface of the lower front teeth is preferable for singing. The acoustic difference between the English and the French **z** is slight.

The vocal cords vibrate. **z** is represented in English by *z* as in *zest,* and *s* as in *music,* **'mjuzɪk,** *x* in *exalt,* **ɛg'zɔlt.**

Examples for English: zeal, sizzle, haze, rose, tens,
zest, puzzle, hazy, rosy, pens,
graze, buzz, his, rise, bells,
baize, hazard, visor, musician, lizards.

In Italian, the **z**-sound varies toward **z** or toward **s** according to the locality, north or south. When the letter *s* is written between vowels, it is usually pronounced **z**; the words *casa, cosi* are pronounced **'kɑzɑ, ko'zi,** by many speakers, and **'kɑzɑ, ko'zi,** by others.

A sound intermediate between **s** and **z** is heard when the letter *s* occurs before the voiced consonants, d, l, n, r, b, m, g, as in *sdegno,* **'zdeɲoᵀ,** *sbaglio,* **'zbɑʎoᵀ,** etc. **z** is often written *z, zz,* as in zelo, **'dzɛloᵀ,** *mezzo,* **'mɛd:zoᵀ.**

Examples for Italian: paese, causa, cortese, viso,
palese, rosa, caso, Marchese,
dz: zero, zebra, orzo, lazzo, dozzina,
zolla, zinco, pranzo, frizzo, bizza,
zeta, zaffiro, manzo, bronzo, orizonte.

French **z** is produced by raising the blade of the tongue toward the upper front gums, while the point or tip of the tongue rests against the inner surface of the lower front teeth, **z** is written *z, s, x, zéro,* **'zero,** *mesure,* **mə'zy:r,** *exil,* **ɛgzil,** *deuxiéme,* **døzjɛm.** When final before a pause, *z* is usually silent, as in *chez, nez, assez, rez,* etc. **z** and **x** are usually linked to the following words, as in *chez eux* **ʃe-zø,** *six heures,* **si-zœ:r.** In plural nouns ending in *rs* the linking is supposed to be made with *r.* In singing, especially in classical song literature, the linking occurs more frequently than in speech, and in spite of the rule, the linking of a final *s* sounded as **z** is usually made. Good taste will be the best guide for the singer in this matter. In all cases where the linking creates a double meaning or a change in the text it is to be avoided.

Examples for French: zéro, bazar, mesure, gaz,
zébre, maison, rose, examen,
zone, briser, seize, exiger,

In German, *s* between two vowels is **z.**

The sound of initial *s* varies somewhat with locality, but the singer should use **z,** as in *Seele,* **'ze:lə,** *Gesicht,* **gə'zɪçt.**

Examples for German: See, Muse, zusammen,
sechs, Zinsen, Wiese,
Senf, Käse, Nase,

The **z**-sound is not generally recognized as existing in Spanish, yet the sound is heard when represented by *s* before a syllable which begins with a voiced consonant, as in *mismo, desde, isla, las manos, es verdad.* By many speakers **s** is sounded in all cases.

For the letter *z* as in *cruz, zurdo,* etc., see **θ**.

Blade-Gums Breathed Fricative **s**, as in *cease* **sis**. The English breathed fricative **s** is produced in about the same way as the voiced **z**, but without vibration of the vocal cords.

Examples for English:	see,	stall,	cats,
	say,	assault,	hats,
	sat,	sister,	ox,
	smooth,	gossip,	ass,

The Italian **s** occurs in the current spelling as in *sono, vesta, tassa, forza,* **'fɔrtsa**, *guizzo,* **'gŭitsoᵀ**, *schiavo,* **'skiavoᵀ**, *scuola,* **'skŭɔ:la**. According to locality **s** occurs exceptionally between two vowels instead of **z**, as in *asino, chiusi, naso, peso, Pisa, susina, riposa, inglese, noioso, mese,* etc. Italian **s** is often long after a vowel and before a stop consonant, as in *risposta,* **ris:'pos:ta**.

				ts.
Examples for Italian:	sano,	tassa,	azione,	azza,
	sera,	esse,	alzare,	cozzo,
	santa,	basso,	forza,	carrozza,
	verso,	festa,	zio,	scherzo.

The French **s** is somewhat more sharply hissed than in English. It is sounded when initial between vowels in a compound word as in *entresol, parasol, contresigner,* etc. **s** is sounded when initial: *sel, silence, soir, sable,* and when followed by a consonant: *obstacle, verse, vaste, scene, science,* etc. Final *s* is sounded in *atlas, bis, fils, hiatus, jadis, hélas, gratis, lys,* etc., and is silent in *bas, pas, bras, dos, jus, puits, fleur de lis,* etc. *s* is sounded **z** in *Dresde, Alsace,* etc. When the letter *x* as in *dix,* is used to indicate a date it is sounded **s** as in *le six janvier,* etc.

When the word *plus* signifies *some more,* the *s* is sounded, thus: I have some more, *j'en ai plus,* **ʒã-ne plys**; when *plus* signifies a negation, *no more,* the *s* is silent; *je n'en ai plus,* **ʒənã-ne ply**. In the word *tous* used as a pronoun, the *s* is sounded, *chantons tous,* **ʃãtɔ̃ tu:s**.

Examples for French:	sel,	question,	russe,	garçon,
	sentir,	brusque,	dresser,	nuptial,
	sauce,	concert,	aristocratie,	dix,

German **s**, occurs final as in *Glas, blass;* before *k* as in *skizzen;* after a breathed consonant as in *absicht,* **'apsɪçt**; **s** is represented by *z* in *zeit,*

tsaɪt, *ch* in *Lachs,* **laks**, *x* in *Hexe,* **'hɛksə**. *s* is sometimes pronounced between vowels as in *grosartig,* **'grosaɾtɪç**.

For initial *sp* in *Sprache,* and *st* in *stehen,* see **ʃ**.

Examples for German: Kasten, Wasser, blass, Zoll, Fuchs, Institut, Kasse, Ross, Ziege, Büchse,

The Spanish *s* is pronounced **s**, except when a voiced consonant follows, in which case it is often pronounced **z**, as in *desde.* The letter *x* is often pronounced **s**, as in *textos,* etc.

Examples for Spanish: sabor, ascenso, casas, sello, suscriptor, señores, soldado, salón, adios,

Sub-Class 6. Blade-Palate Consonants **ʒ**, **ʃ**.

Blade-Palate Voiced Fricative **ʒ**, as in *azure,* **æʒəɹ**. The English voiced fricative **ʒ** is produced by raising the blade and tip of the tongue together toward the fore part of the hard palate, while the sides of the tongue touch the upper side teeth or gums. A central channel, somewhat wider, more open, and farther back than that for **z**, is thus formed, and the breath, passing outward through this channel, makes an exit between the upper and lower teeth with a whizzing sound; the vocal cords vibrate. The lips are in speech often rounded, but the singer should be careful to avoid this. In English *g* and *j* often represent the affricate **dʒ**, as in *gem, danger, judge, longevity,* or *d* in *verdure, soldier,* etc. *Z* or *s* often represent **ʒ**, as in *azure, pleasure, treasure, measure, usury, persuasion,* etc.

In Italian the letter *g* before front vowels, as in *gemma, cagione,* represents the affricate **dʒ**, somewhat as in English spelling. This Italian affricate is nearly but not exactly the same sound as in English, the explosion of the **d** into the **ʒ** being less energetic; moreover, **dʒ** is considered by the Italian to be a single sound or **d** and **ʒ** simultaneously pronounced. In Tuscany, when the single letter *g* occurs between two vowels, it is pronounced as a simple **ʒ** without the stop **d**. When doubled, as in *viaggio,* the **d** is long, thus: **vĭad:ʒoᵀ**.

Examples for Italian: già, digiunare, loggia, genio, orgia, leggere, gioia, ingegno, oggi, giarra, giardino, ragione.

The French **ʒ**-sound is ordinarily represented by *j* or by *g* before *e* or *i*. The lips are often slightly rounded.

Examples for French: jaune, bougie, gorge, **large,**
jeu, congé, gages, neige,
ajusté, ange, charge, baggage.
joli, asperge, juge,

In German the **ʒ**-sound occurs rarely, and only in semi-foreign words, such as *journal, baggage,* etc.

The **ʒ**-sound does not occur in Spanish.

Blade-Palate Breathed Fricative **ʃ**, as in *she,* **ʃi**.

The English breathed fricative **ʃ**-sound is produced in about the same way as the voiced **ʒ**, except that the vocal cords do not vibrate. In English *ch, tch,* and *t* or *te* often represent the affricate **tʃ**, as in *church* **tʃəːɹtʃ**, *witch, righteous.* **ʃ** is represented by *x* in *anxious, luxury; ce* and *ci* in *ocean, gracious.*

Examples for English: sham, fish, machine, kitchen, racial,
shall, sure, action, chime, future.
fashion, sugar, nature, chance, precious,
dash, issue, nuptial, much,

The Italian **ʃ**, usually written *sce* or *sci,* is (except when initial after a pause) long and often geminated or doubled, as in *la scena,* **la ˈʃːɛːna**. Of the affricate **tʃ** represented by *ce, ci,* with its Tuscan varient **ʃ**, and of *cc,* **tːʃ**, the same may be said as was said above of **dʒ** and **dːʒ**, except that the vocal cords do not vibrate.

Examples for Italian: scillo, **tʃ** cero, cielo, luce,
scelta, cenno, ciglia, croce,
scenario, cieca, Cesare, pace,
conoscenza, cica, cinque, giudice.

In French, **ʃ** is usually represented by *ch.*

Examples for French: chaise, chercher, **cherche,**
chance, cochon, bouche,
chaud, couchette, sèche,
choux, sachet, duché.

The German **ʃ**-sound is represented by *sch,* as in *Schnee,* **ʃneː**, and by *sp* and *st,* as in *Spur,* **ʃpuːr**; *Strom,* **ʃtroːm**.

Examples for German: Schale, geschärft, Spinne, Student,
Schatten, zwischen, Sprache, Stück,
Schiff, Zischlaut, Spross, Sturm.

In Spanish, **ʃ** occurs only in the affricate **tʃ**, which is ordinarily written *ch,* as in *chico,* **ˈtʃikɔ**, and pronounced with (1) a sort of palatalized **t**-stop, somewhat like a palatal *k,* in which the tongue-tip is apt to be free or even depressed, and (2) a **ʃ**-fricative.

Examples for Spanish: mucho, chinchon, ancho,
colcha, charol, percha,
cincha, noche, muchacho.

Class 2. Medio-linguo-Palatal Consonants.

Sub-Class 1. Palatal Nasal Stop Consonant **ɲ**.

The medio-linguo-palatal nasal voiced stop **ɲ**, as in French *signe,* **siɲ**. The French, Italian, and Spanish *gn*-sound is produced by raising the middle portion of the tongue, or that part just back of the blade, against the top or vault of the hard palate so as to form therewith a complete closure. The soft palate, or veil, is lowered, the sound thus receiving nasal resonance. The vocal cords vibrate. The sound is thus a voiced nasal continuant. **ɲ** occurs in Spanish, represented by *n,* as in *mañana,* **ma'ɲana**; in Hungarian, and many other languages. The **ɲ**-sound is often identified with what is described as its nearest English equivalent, namely the **nj**, as in *onion*. In English, however, the sounds are two articulations, while the **ɲ** of Italian, French and Spanish is a simple sound, or **n** and **j** sounded simultaneously.

Examples for Italian: signor, disegno,
pugna, rampogna,
mignolo, sogno.

The French **ɲ**-sound is produced as for Italian. It is sometimes called *"n mouillée"* or "liquid" *n*.

Examples for French: *grogner,* **'grɔɲe**; *signal,* **si'ɲal**,
enseigner, besogne,
baignoire, guigne,
ognon, empoigner.
Examples for Spanish: señor, mañana, miñon,
niña, año, riñón,
caña, peceño.

Sub-Class 2. Palatal Lateral Consonant **ʎ**

The palatal voiced lateral **ʎ**, as in Italian *gli,* **ʎi**. The Italian and Spanish palatal lateral, or *gl*-sound **ʎ**, is made by raising the middle portion of the tongue, that is, the portion of the tongue just back of the blade, against the top or vault of the hard palate, so as to form therewith a central closure, while on each side an opening is left, as in the case of an ordinary or point-gums lateral consonant **l**. The breath, passing outward through these two side channels or lateral openings, makes its exit between the upper and lower back teeth and thence between the lips. The tongue-tip normally rests on the inner surface of the lower front teeth. The

vocal cords vibrate. **ʎ** is thus a voiced lateral continuant. The **ʎ**-sound is often identified with what is described as its nearest English equivalent, namely the **lj**, as in *William;* in English, however, the sounds are two articulations, while in Italian and Spanish the **ʎ** is a simple sound. **ʎ** does not occur in ordinary or standard French, but is heard in the south of France and is frequent in Spanish and many other languages. It does not occur in German. In Italian, when **ʎ** occurs after a vowel, or medial, it is usually geminated or doubled.

Examples for Italian: gli, meglio,
egli, quegli,
negli, voglio,
figlio, migliore.

In Spanish, **ʎ** is represented by **ll**, as in:
llama, hallar, llover,
millón, caballo, silla,
ella, estrella, caballeros.

Sub-Class 3. Palatal Fricative Consonants **j.ç**

Palatal Voiced Fricative **j** as in *yes,* **jɛs**.

The English voiced fricative **j** is produced by raising the middle part of the tongue toward the top or vault of the hard palate, in about the same way as for the vowel **i**, but for **j** there is approximation almost amounting to contact, whereas for **i** the passage is comparatively free. The veil or soft palate is raised and the vocal cords vibrate.

The breath, passing outward through the narrow central channel, makes its exit through the mouth, the resulting sound having a slight fricative quality easily confounded with the non-fricative sound of the vowel **i**, especially when **i** happens to be non-syllabic in function as is often the case in rising diphthongs, such as those in *lieu, view,* in which the first sound is in the speech of many often a pure vowel. The tip of the tongue is neutral, and singers are advised to keep it in light contact with the inner surface of the lower front teeth.

In English, the **j**-sound often occurs where, in the current spelling, it has no separate letter to represent it, before the vowel *u,* either initially, as in *use,* **jus**, or medially, especially after a voiced consonant, as in *new* **nju**, *mute* **mjut**. In weakly stressed forms of words such as *you,* the **j** often becomes the vowel **i**; the singer is advised to use **j**.

Examples for English: yeast, yearn, canyon, news,
yield, youth, million, duke,
year, yolk, beauty, duty,
yellow, yoke, music, senior.

For Italian **j**, see **ĭ**.

In French, **j** is produced practically as for English, but with slightly less friction, and the sound is considered to be a semi-consonant. It is represented by *y* as the initial of a word, as in *yeux,* or between vowels as in *voyelle,* by the vowel **i** followed by one or two vowels in the same syllable as in *pied, aieux;* when the vowel, however, is preceded by two consonants it retains its full vowel quality, thus, *prier,* **prie.**

The **j**-sound represents the so-called *liquid l* or *l mouillée,* written *il* as a final at the end of a word, as in *fauteuil,* **fotœːj**, and *ill* between vowels as in *oreille,* **ɔrɛːj.**

The French composer often writes two notes to a syllable containing the French semi-consonant **j**-sound. In order to meet the demands of the musical setting the singer may, in this case, use the semi-vowel **ĭ**; for example, in the song "La Ballade des Gros Dindons," by Chabrier, the composer has set the word *procession* to four notes. In speech this word would be pronounced **prɔ-sɛ-ˈsjɔ̃**, and in this song **prɔ-sɛ-sĭ-ɔ̃.**

Examples for French:

yeux,	dévoyé,	pied,	ail,	volaille,
yole,	moyeu,	cieux,	travail,	paille,
hyacinthe,	voyelle,	hier,	éventail,	caille,
payer,	royal,	ancien,	conseil,	douille,
crayon,	voyant,	cordial,	soleil,	mouille,
écuyer,		science,	orteil,	fille,
fuyant,		faciaux,	orgueil,	billet,
noyau,			treuil,	sillon.

The German **j**-sound is like the English, except that its fricative quality is often more noticeable.

Examples for German:

Jugend,	Jahr,	Jäger,
Jacke,	jeder,	Major,
ja,	Jude,	jucken.

In Spanish, the fricative consonant **j** is ordinarily spelled *y*. It usually occurs as the initial sound of a word or syllable. It is often confounded by students with the high front vowel **i**, especially when this vowel is non-syllabic.

Examples for Spanish:

ayer,	hoyo,	rayado.
yugo,	yegua,	
Yo,		

Palatal Breathed Fricative **ç** as in German *ich,* **ɪç.**

This breathed palatal fricative **ç** is often noticeable in English, especially after a pause or after a breathed consonant in the same syllable, as in *hue,* **çu**, or *cute,* **kçut.** ç is produced in about the same way as its voiced mate **j**, except that the vocal cords do not vibrate, at least during the greater part of the duration of the sound, breath being for the most

part substituted for voice. This consonant is not generally recognized as existing in English, as it usually occurs only incidentally and is not distinctive of differences of meaning, except in rare cases, as in *hue,* **çu**, and *you,* **ju**. In German, however, and in other languages **ç** occurs as an independent and important sound.

In Italian, as in English, **ç** occurs only incidentally, if at all, as a more-or-less voiced variant of **j** and should be avoided by the singer.

In French, there is less (if any) tendency than in English to use **ç** for **j** just after breathed consonants, and the sound may hardly be said to exist in ordinary speech.

In German, the *"ich-laut"* **ç** occurs mostly after front vowels as in *Licht;* after consonants as in *solch, durch, manch;* after back vowels in the suffix *chen,* as in *Frauchen, Mamachen;* and often in the speech of many finally as in *Berg*. The singer should be careful not to use **ʃ** for **ç**, that is to say, **dɪʃ** for **dɪç** in the word *dich,* etc.

The **ç**-sound does not occur in Spanish.

Examples for German: siech, stechen, Dolch,
mich, Eichel, durch,
Wicht, Wächter, gleich,
Lerche, Bücher, weich.

Class 3. Postero-linguo-Velar Consonants

Sub-Class 1. Velar Stops **g**, **k**, **ŋ**.

Velar Voiced Stop **g**, as in *gag,* **gæg**.

The English **g** is produced by (1) raising the back of the tongue against the veil or soft palate so as to form a complete closure therewith, while the veil itself is raised against the rear wall of the pharynx so as to close the opening from the pharynx into the nose passages; (2) holding the organs briefly in the position thus attained; and (3) by forcing the breath outward from behind the linguo-velar contact so as to explode or break through the stoppage. The vocal cords vibrate, at least during a part of the held portion or tenure of the sound. When the **g** is intervocalic it is voiced throughout. The lips are neutral.

In the production of **g** the contact of the organs and their subsequent separation or release varies according to the position necessarily assumed by the organs in producing the sounds which immediately precede or follow. The contact is farther front in *gig* than in *go*. The singer should avoid the release of a final **g** into a vowel, and should pronounce the word *bag* **bæg**, instead of **bægə**. The letter *x* often *represents* **gz**, as in *examine, exalt, luxurious,* etc. *g* is silent in *sing, singing, tongue, gnaw, gnat, aught, freight, right,* etc.

For *g* in *gem,* see **ʒ**.

Examples for English: gone, gall, again, figure, egg,
goose, ghost, agog, gargle, brig,
gear, gig, giggle, anger, sag.

For Italian *gn,* see **ɲ**; for *gl,* see **ʎ**; for *ge, gi,* see **ʒ**.

Examples for Italian: grande, gloria, fregata,
galea, lungo, lingua,
grosso, gigante, fugare.
ganghero,

In French the letter *g* is silent in *long, étang, poing, Luxembourg,* etc. When words such as *jong, sang, long, rang* are followed by a word beginning with a vowel the *g* is sometimes linked by stress to the next word and is then pronounced **k**, as in *rang élevé,* **rã-kelve**.

In French, the letter *x* between vowels represents *gz,* as in *exemple* **egzãpl**, etc.

For *ge, gi,* see **ʒ**; for *gn,* see **ɲ**.

Examples for French: garde, agrafe, orgueil,
guerre, droguiste, aveugle,
gloire, bagage, bague,
gant, fatigue, drogue.

In German, the sound of the letter *g* varies considerably between **ɡ**, **k**, **g**, **x**, **j**, and **ç**, according to the position of the letter and according to the part of Germany or of the German people concerned.

German standard stage usage is to use the voiced stop **ɡ** for *g* before a vowel or a voiced consonant, as in *gehen, sagen, gleich, Wagner;* the voiceless stop **k** for *g* before a voiceless consonant or final, as in *weg, Tag, sagte, Jagd;* the voiced fricative **j** for *g* before a vowel, as in *könige, billiger;* and the voiceless fricative **ç** for *g* before a voiceless consonant or final, as in *königs, König, billig.*

The singer is advised always to use the letter *g* as a stop, either voiced as **ɡ** or voiceless as **k**, as the case may require, according to the following rules:

(1) Use the voiced stop **ɡ** whenever the letter *g* is initial at the beginning of a word or at the beginning of the second part of a compound: *gut, Gang, geber, gebeten, Gnade, gleich, gross, ausgraben, vergessen.* (In some dialects, chiefly in the North, even initial *g* is a fricative, **j**, **ç**, **ɡ**, or **x**.)

(2) Use the voiced stop **ɡ** whenever the letter *g* is immediately preceded by a front vowel or by a consonant and followed by a vowel or by an *n* in the same word: *billiger, weniger, könige, Wege, Berge, Talges, Egge, Gegner.* (In most of North and Middle Germany and in some parts of South Germany the voiced fricative **j** is ordinarily used.)

(3) Use the voiceless stop **k** whenever the letter *g* is immediately preceded by a front vowel or by a consonant, and is followed by a voiceless consonant, or else occurs at the end of a word or at the end of the first part of a compound: *königs, legte, Berg, Talg, borgte, billig, König, wenig, Zeug, Zeugnis, folgsam.* In most of North and Middle Germany and in some parts of South Germany the voiceless fricative **ç** is used.

(4) Use the voiced stop **g** whenever the letter *g* is immediately preceded by a back vowel and followed by a vowel or by an *n: Tage, logen,* many and in some parts of South Germany the voiced fricative **ɣ** is used.)

(5) Use the voiceless stop **k** whenever the letter *g* is immediately preceded by a back vowel and is followed by a voiceless consonant or else occurs at the end of a word or at the end of the first part of a compound: *fragt, Tag, log, Lug, Augapfel, waghalsig.* In most of North and Middle Germany and in some parts of South Germany the voiceless fricative **x** is used.

(6) For the pronunciation of *g, gg, gh, gn, gu,* etc., in words adopted into German from English, French, Greek, Italian, Latin, see HEMPL, "German Orthograph and Phonology" (1897), p. 133.

The singer should carefully differentiate between:

g in Krieger	**ç** in Kriecher	**g** in Lagen	**x** in lachen
eigen	Eichel	nagen	Nachen
Reigen	Reichen	Kragen	Krachen
bergen	Lerchen	Auge	Hauche
Schwäger	schwächer	Schwager	schwach
Tiger	Tücher	Wage	Wache
Sigel	Sichel	taugen	tauchen
		Magen	machen
		Rogen	Rochen

In Spanish, the stop consonant **g** is usually represented by the letter *g* before a consonant and before the back vowels *a, o, u,* and by *gu* before the front vowels *e, i: grado, gallo, gobierno, dogo, guerra.* **g** occurs initial after a pause and also just after a nasal consonant, as in *pongo.* The letter *g* in Spanish also frequently represents the fricative sounds **ɣ** and **x**. The letter *x* is usually pronounced **s**, **gs** and **x**, see **x**.

Velar Breathed Stop **k**, as in *cook,* **kʊk.**

The English **k** is produced in about the same way as its voiced mate **g** except that the vocal cords do not vibrate. The articulation of **k** is usually more energetic than that of **g**, because no energy is absorbed in vibrating the vocal cords. The singer should be careful not to allow the **k**-articulation to predominate in the off-glide or explosion of the **k**-tenure into the following vowel. He should also avoid adding either an **h** or an **ə** to an exploded **k**, and thus should pronounce the word *rock,* **rʊk**, instead

of **rəkə** or **rəkh**. When final, after a short strongly stressed vowel, **k** is often long or in speech not exploded at all. In words like *act* the **k** has no explosion or audible off-glide in speech. The singer should pronounce the off-glide into the **t** very distinctly. **k** is written: k, c, ck, ch, q, x. The letter *x* often represents **ks**, **kʃ**.

Examples for English: kite, cue, chemist, quick, luxury,
keen, critic, anchor, queen, excess,
kettle, cackle, choir, exchequer, anxious,
sceptic, school.

In Italian **k**, the off-glide of the tenure is not as strongly aspirated as tends to be the case in English, but in the vulgar dialect of Tuscany intervocalic **k** is itself pronounced **h**.

Examples for Italian: Casa, pesca, questo, **acca**, scherzo,
come, cuculo, quello, accordo, scatola,
crede, declino, cinque, schiavo, scolare,
crine, duca, acqua, schioppo, scuola.

In French, the **k** is produced in about the same way as for Italian. It is represented by *c, cc* before a, o, u; by *ch, q,* and rarely *k*. Final *c* is silent in *banc, clerc, estomac, franc, jonc, tabac, tronc, arsenic,* etc., and sounded **k** in *arc, choc, duc, parc, public, roc, sac, sec, trac, avec,* etc.

Final *c* in the word *donc* is sounded **k** when the word begins or ends a sentence, and in the middle of a sentence when followed by a vowel. *c* is pronounced **g** in *second*. The letter *x* represents **ks** or **gz**.

Examples for French: court, cinq, accident, kilo,
carte, avec, exception, képi,
cercle, sac, excess, qui.
tact, coq,

The German **k** may perhaps be made with somewhat less extensive contact of the tongue and veil than for English, and hence may sound slightly less thick. By many speakers the final *g,* as in *Tag,* is pronounced **k**.

Examples for German: Krone, Locke, Takt, Trank,
Kerze, flicken, Fuchs, senken,
Kuss, Ecke, Lachs, Hexe.

In Spanish the stop consonant **k** is usually represented by *c* before *a, o, u,* and by *qu* before *e, i: casa, querer*. At the end of a syllable or word **k** is written *c,* as in *actor, cognac*. Occasionally *k* or *ck* occurs in the current spelling, as in *cok, bock*. The letter *c* before another consonant is often a voiced **g** or **ɡ**, as in *diccion* **digθĭon**, *técnica*. The letter *c* is often pronounced **θ** *afeccion,* **afeg'θĭon**.

Examples for Spanish: casa, efecto, buscada.
cinco, cognac,
doctor, vivac,
quince, inquirir,

Velar Voiced Nasal Stop **ŋ** as in *sing,* **sɪŋ**. English **ŋ** is produced by raising the back part of the tongue so as to make a complete contact with the veil or soft palate, and hence the same stoppage or closure as that of **g** and **k**; but the soft palate, instead of being raised, remains lowered, the sound thus receiving nasal resonance; and the breath, passing upward through the pharynx, and outward through the nasal passages, finds an exit at the nostrils. The vocal cords vibrate. The sound is thus a nasal voiced continuant. The tip rests against the inner surface of the lower teeth. The sound **ŋ** is represented in both English and German by *ng* and *n,* but it contains neither an **n**-sound nor a **g**-sound, nor is it a merging of these two sounds, but a simple nasal consonant, bearing the same relation to **g** and **k** that **n** bears to **d** and **t**, and that **m** bears to **b** and **p**. **ŋ** is sonorous, and often syllabic in colloquial English, German, and Italian. **ŋ** does not occur in French.

The singer should avoid nasalizing a vowel in English, which is preceded or followed by this nasal consonant.

Examples for English: sing, anchor, distinct, conquer,
ring, anxiety, wringing, conqueror,
bank, hunger, singing, banquet.
monk, function, tincture,

In Italian the **ŋ**-sound is often not mentioned in Italian text books, but it is nevertheless heard in the assimilation which occurs in quick speech when *n* is followed by *g* or *k,* as in *lungo, banco.*

In German, medial *ng* in finger, etc., is pronounced **ŋ**, as in English *singer,* and not **ŋg**, as in English *finger.* The singer should thus carefully differentiate between:

sang, sank,
bang, Bank,
fing, Fink
Fang, Frank,
klingen, klinken,
Engel, Enkel,
jünger, Junker,
gedrängt, getränkt.

ŋ is not generally recognized as existing in Spanish, yet it occurs for *n* before the velar stop **g**, as in *pongo,* before the velar stop **k**, as in *cinco,* and sometimes also before the velar fricative **x**, as in *fingir* **fin'xir**.

Examples for Spanish: pongo, monja, manco, banco, lengua, cinco.

Sub-Class 2. *Velar Fricatives* **g**, **x**, **R**. Velar Fricative **g** as in Spanish *llegada* **ʎegaðа**. The Spanish open or fricative g-sound is produced in about the same way as its breathed mate x, except that the vocal cords vibrate for **g**. It is similar to the voiced fricative frequently heard in German for intervocalic *g,* as in *wagen.* **g** occurred in Old English, and is common in many languages; it does not occur in Modern English, nor in French or Italian. In Spanish speech **g** occurs between vowels or between or next to voiced sounds. The letter *x* often represents **gs** as in *exhalar,* **egsa'laɹ**; *c* before nasal consonants is commonly pronounced **g**, as in *tecnica,* **'tegnika**, but on the stage and in singing either **g** or **k**; the same may be said of *cc,* as in *accion,* which is commonly **agθj'ɔn**, and for singing either **agθĭɔn**, or **akθĭɔn**.

Velar Breathed Fricative **x**, as in German *ach* **ax**. The German *"ach-laut"* **x** is produced by raising the back part of the tongue against the veil or soft palate in the same way as in making **g** or **k** except that instead of there being a complete closure or stoppage, a central passage or opening is left between the tongue and the soft palate. The breath, passing through this channel with a fricative sound, finds its exit through the mouth. The vocal cords do not vibrate. When the **x**-sound follows a back vowel, as in *Buch, auch,* the lips are rounded. The **x**-sound occurs in Scotch English as in *loch.*

In Spanish, the fricative **x**-sound is represented by the letter *j* as in *jarro, hijo, boj,* by *g,* as in *gemir, pagina, fingir;* and sometimes by *x, as in Sax, Mexico* (also *spelt Mexijo*). The **x**-sound does not occur in English, French, or Italian.

Examples for Spanish: jugador, rojo, aguja, bajo, oreja, girar, cajón, borraj, coger.

Velar Voiced Trill **R**, as in French *Paris,* **'paRi**. The French **r**-sound varies in different localities. In the cities of France, the predominant variety is a uvular trill or a uvular fricative. In the country districts the lingual point-trill is more generally heard.

In singing, oratory and on the dramatic stage, the tongue-point trill **r** is considered preferable. On this subject Paul Passy writes:

"Au point de vue de l'enseignement, il est indifférent de faire prononcer **r** or **R** en parlant Français, et le mieux est de laisser les élèves adopter le son qui leur est le plus facile. Il y a des professeurs—surtout des Anglais et des Americains—qui se donnent beaucoup de mal pour prononcer eux-mêmes et inculquer à leurs elèves le 'r parisien'; c'est un enfantillage, car lors, même qu'on réussirait, le résultat ne vaudrait pas tant d'efforts." . . .

"In teaching, it is immaterial whether **r** or **R** is pronounced in speaking French, and it is better to allow the student to use the sound which is easier for him. There are teachers (especially English and American) who make great efforts to pronounce the sound themselves, and to inculcate the *r parisien* in their students. This is childish, for even if they succeeed, the result is not worth the effort." [Translation.]

Class 4. *Labial Consonants*

Sub-Class 1. Bilabial Voiced Stop **b**, as in *bib,* **bɪb**. The typical English **b** is produced by (1) placing the upper and lower lips in contact with each other, while the veil or soft palate is raised against the rear wall of the pharynx so as to close the breath-exit from the pharynx into the nose-passages; (2) by holding the organs briefly in the position thus attained; and (3) by forcing the breath outward from behind the bilabial contact so as to explode or break through the stoppage. The vocal cords vibrate, at least during a part of the held position or tenure of the **b**. When **b** is intervocalic, it is voiced throughout. The tongue is neutral. The separation or release of the organs, or, in other words, the opening or explosion of the stoppage, varies according to the position necessarily assumed by the organs in producing the sounds which immediately follow the **b**. If a vowel or a pause follows, as in *bib,* the **b** has central oral release. The singer should avoid adding a vowel **ə** to the release and should pronounce, for example *bribe,* **braɪb**, rather than **braɪbə**. The release in English and German colloquial usage into *m* is often nasal, but the singer should avoid this, and should sing *ribbon* as **rɪbən**, not **rɪbm**, and German *eben,* as **ˊe:bən**, not **ˊe:bm**. **b** is silent in *thumb, dumb, subtle, tomb, climb, crumb, plumber, debt, comb, numb,* etc.

Examples for English:	but,	bubble,	tub,
	bad,	brother,	slab,
	bit,	trouble,	bib.

Paul Passy, Petite Phonétique Comparée, p. 77.

Examples for Italian: bocca, brodo, abile,
basta, bella, abbozzo,
bene, buono, abbattere,
buffo, babbo, sbaglio.

In French, **b** is usually voiced throughout. The final *b* of a syllable followed by *s* or *t* is sounded **p**, as in *obstacle,* **ɔp'stakl**; **b** is sometimes silent, as in *aplomb, plomb,* etc.

Examples for French: Bâton, bouteille, abbesse,
blé, abeille, abbé,
abricot, courbe, barbier.

In German, *b* at the end of a prefix, such as *ab,* is sounded **p**, as in *abgehen,* or at the end of a word as in *Laub.*

Examples for German: Bart, aber, Elbe.
Bett, eben,
Blut, Silbe.

In Spanish, the stop **b** occurs after *m* as in *hombre,* and after a long pause. Spanish *b* elsewhere, when between voiced sounds, represents the bilabial fricative **ʋ**.

Examples for Spanish: hombre, sombra, lumbre.

Bilabial Breathed Stop **p** as in *pipe.*

English **p** is produced in about the same way as its voiced mate **b**, except that the vocal cords do not vibrate. The articulation is usually more energetic than that of **b** because no energy is absorbed in vibrating the vocal cords. The singer should be careful not to allow the **p** articulation to predominate in the off-glide or explosion of the **p** into the following vowel. In other words, he should avoid adding either a laryngeal fricative **h** or a vowel **ə** to a final exploded **p**, and should pronounce, for example, *keep,* as **ki:p**, rather than **ki:ph**, or **ki:pə**.

p is silent in *receipt, psalm, raspberry, ptomaine, psychology, pseudo, comptroller.*

Examples for English: post, happen, pope, limped,
pay, ripple, pap, glimpse,
poke, open, pop, lamps.

Examples for Italian: posa, papiro, paura,
papa, pioppa, sopra.

In French, **p** is often represented by the letter *b* as in *absurde, absent,* etc. The letter *p* is silent in *sept, trop, coup, drap, escompte, corps, baptême, exempt, sculpture,* etc. Final *p* in the words *beaucoup* and *trop* are linked.

Examples for French: peur, papillon, papier, appétit, jupe,
peux, paon, nappe, oppose, serpe.

In German, **p** is often represented by **b** as in *ob, Obst, Trübsinn, Laub,* etc.

Examples for German: Post, Puppe, Purpur,
Plan, Pferd, Kuppel.

In Spanish, *p* before a voiced consonant is itself often pronounced as voiced **ʋ** or **b**. Initial *ps,* in *psicologia,* etc., the *p* is usually silent, as also in certain words such as *subscriptions,* **suskriθĭ'ɔn**, etc.

Examples for Spanish: padre, capitulo,
capa, comprado,
eclipse, capsula,
apto, reptil.

Bilabial Voiced Nasal Stop **m**, as in *maim,* **meɪm**.

English *m* is produced by placing the upper and lower lips in complete contact with each other, forming the same kind of stoppage or closure as that for **b** or **p**; but the soft palate, instead of being raised, remains lowered, the sound thus receiving nasal resonance. The breath is ordinarily free to pass outward through the nasal passages, and thence escape through the nostrils. The sound is thus a voiced continuant. The vocal cords vibrate.

The singer should avoid nasalizing a vowel which is preceded or followed by **m**.

m is sonorous and readily becomes syllabic, as in English *blossom, fathom,* etc.

The singer who finds such a syllable set to a given note, should interpolate the obscure or mixed **ə** vowel before the consonant, and give the syllable the shortest possible duration or time-value. Under no circumstances should any clear vowel, such as **ɛ** or **ʌ** be used.

Examples for English: mean, may, fumbler, deem,
morn, mist, summer, calm,
mule, mere, humming, harm.

Doubled *mm,* like all other doubled consonants in Italian, receives the time-value of two sounds, thus: *fiamma,* **fĭ'am:a**.

Examples for Italian: madre, programma,
mio, imminente,
mano, mamma,
momento, marmo.

In French, *m* after a short strongly-stressed vowel, and before a pause, is, like other consonants usually long, as in *femme,* **fam:**.

A vowel followed by *mm* and in a few cases by a single *m,* loses its nasal resonance, thus: *image* **imaʒ**, *immense, homme, flamme, pomme,* etc.,

also when an *m* is followed by an *n*, as in *indemnité* **ɛ̃dɑmni'te**, *omnipotent, automnal, amnistie, somnambule, hymne, calomnie,,* etc. The letter *m* is often silent, as in *automne, condamner, faim, nom, parfum, pronom,* etc.

Examples for French: mais, dormir, rémailler, flamme,
motif, amande, immobile, dame,
moi, escrime, maman, âme.

Examples for German: Mann, Stamm, Amtman,
Marmor, Zimmer, Trommel.

In Spanish, the letter *n*, whenever directly followed by a bilabial consonant is often pronounced *m*, as in *envio,* **ɛm'biɔ**. Final *m* is often pronounced *n, minimum,* **'minimun**.

Examples for Spanish: moda, ramo, comida,
madre, amor, hombre,
mismo, septimo, mucho.

SUB-CLASS 2. BILABIAL FRICATIVE CONSONANTS.

Bilabial Voiced Fricative **ʋ**, as in Spanish *saber,* **sɑ'ʋɛɾ**. The Spanish fricative consonant **ʋ** is produced by placing the upper and lower lips near each other (with little or no protrusion or pursing) so as to leave a narrow slit-like opening between them, somewhat as in blowing out a candle. The breath, as it passes out between the lips, causes audible friction. The tongue is neutral (and not raised at the back, as in articulating **w**). The veil is up. The vocal cords vibrate. The consonant **ʋ** is thus a voiced continuant. Compare the regular Japanese *f*, which is the breathed mate of this voiced **ʋ**.

In the current Spanish spelling, the letters *b* and *v* have the same phonetic value, namely, the stop **b**, or the fricative **ʋ**, according to circumstances. When the *b* or *v* is initial after a long pause, or comes just after an *m* or an *n*, the sound of the *b* or *v*, is the stop consonant **b**. Elsewhere *b* and *v* represent the fricative **ʋ**, as in *Habana, Cuba, uva, obviar,* **ɔʋ:iɑɾ**.

Examples for Spanish: cabo, alveo, arriba, objeto,
alba, hablar, cerveza, nieve,
uva, cabellera, subir, abrigo.

Bilabial fricative or semi-consonant **ɥ** as in French *huit,* **ɥit**.

The French fricative semi-consonant **ɥ** is produced by so closely rounding the lips (without much protrusion) that the breath, in passing out through the small opening between them, causes audible friction, and at the same time raising the middle part of the tongue toward the top of the hard palate as in articulating the high-close-front vowel **i**. The veil or soft palate is up. The vocal cords vibrate. **ɥ** may be classified as a semi-

consonant or fricative **y** with so much lip-rounding as to produce a sound resembling a bilabial fricative. The French semi-consonant **ɥ** bears the same relation to the labialized palatal or front vowel **y** as that which the French semi-consonant **w** bears to the labialized velar or back vowel **u** except that in **ɥ** the lips are less rounded than for **w** and **ɥ** is palatalized, whereas **w** is velarized. The singer should avoid the pronunciation of **w** for **ɥ** and should pronounce *suis* **sɥi** instead of **swi**. In Slavonic and other languages the consonant or constrictive **ɥ** is often confounded with the rounded palatal vowel **y**, especially when the **y** is supposed to be non-syllabic.

Examples for French: puits, huit, lui,
puis, suave, nuit,
ruer, cuisine, lueur,
muet, rueur, suède.
nuage, tuer,

Labiovelarized Voiced Fricative **w**, as in *won* **wʌn**.

The English fricative consonant **w** is produced by protruding the lips and so rounding them that the breath, in passing out through the small opening between them, causes audible friction, and at the same time raising the posterior or back part of the tongue toward the veil or soft palate as in articulating the high-close-back vowel **u**. The veil is up. The vocal cords vibrate. **w** is thus a voiced consonantal or fricative **u** or an **u** with so much lip rounding as to produce a bilabial fricative sound. The **w**-sound does not occur in German.

In English the voiced fricative consonant **w** is usually represented in the current spelling by the letter *w* or *u* and rarely *o*. **w** is often in large part unvoiced after a breathed consonant in the same syllable, as in *twice, quick, sweet*. The letter *w* is often silent, as in *write*.

Examples for English: weak, frequent, dwarf,
weal, quarrel, twice,
would, quart, swear,
wane, queen, square.
one,

For Italian **w**- or **ŭ**-sound see **ŭ**.

The French semi-consonant **w** is produced as for English **w**, except that for the French sound there is less audible friction. It is represented in the current spelling by vowel digraphs, as in *oui* **wi**, *poire* **pwa:r**, etc. The semi-consonant **w** bears the same relation to the back vowel **u** as that which the French semi-consonant **ɥ** bears to the front vowel **y**, but that for **w** there is more protrusion of the lips than for **ɥ** and **w** is velarized, whereas **ɥ** is palatalized.

The French composer often writes two notes to a syllable containing the French semi-consonant **w**-sound. In order to meet the demands of the musical setting the singer may, in this case, use the semi-vowel **ĭ**; for example, in the fifth line of the song "Ouvre tes yeux bleus," by Massenet, the composer has written four notes to the word *épanoui.* In speech this word would be pronounced **e-pa-'nwi**, and in singing this song may be transcribed **e-pa-'nŭ-i**

The French semi-consonant **w** is produced as for English **w**, except that for the French sound there is less audible friction. It is represented in the current spelling by vowel-letter digraphs, as in *oui* **wi**, *poire* **pwa:r**, etc.

Examples for French: oie, oindre, loin,
oiseau, moins, juin,
ouate, bois, douane.

For German **w** see **v**.

For Spanish **w**- or **ŭ**-sound see **ŭ**.

4. *Labio-velarized Breathed Fricative* **ʰr** as in English *when,* **ʰrɛn**.

The English breathed fricative **ʰr** or *wh*-sound is produced in about the same manner as its voiced mate **w**, except that the vocal cords do not vibrate.

There is noticeable variation in local and individual usage as to initial **ʰr** and **w**. The singer is advised to pronounce the **ʰr**-sound distinctly in the following words in order to more clearly distinguish *wheel* from *weal, whale* from *wail, which* from *witch,* etc. Initial *wh* in *who, whoop, whole, whom, whose* is pronounced **h**.

Examples for **ʰr**: what, wheeze, whence, wherein,
wheat, when, where, whether,
whiff, while, whirl, whisky.

Sub-Class 3. Labiodental Fricative Consonants

Labiodental Voiced Fricative **v** as in *vivid* **'vɪvɪd**.

English **v** is produced by placing the lower lip near or in light contact with the lower edges of the upper front teeth, so as to form a thin, slit-like opening, such that the breath in passing outward through this opening causes audible friction. The vocal cords vibrate. The veil is up. The consonant **v** is thus a voiced continuant. The English **v** in *have,* when followed by the initial breathed stop of the word *to,* which so often comes after it, has a marked tendency to change into *f*: **hæf tu**. The singer must pronounce **v**.

Examples for English: vale, revive, vivacity,
vine, living, delve,
vast, river, wave.

In Italian **v**, like other consonants, is often geminated or doubled by sudden augmentation of stress in the midst of the sound's duration, as in *é vero?* **ɛ v:er:oᵀ.**

Examples for Italian: vivo, vale, trovare,
vengo, vampa, sovvenire,
verso, povero, ravvedere.

In French, a final *f* is linked to the initial vowel of the next word, as in *neuf ans;* the *f* is then pronounced **v**, **nœ-vɑ̃**. See **f**.

Examples for French: vœu, vue, verve,
voile, ovation, esclave,
vivre, envoi, suave,
vainqueur, ouvrage, veuve.

In German, **v** is commonly written *w* or sometimes *u*. When *w* is written in words like *Schwester, Quelle, zwei,* the **v** is pronounced by many Germans **ʋ**. The singer should pronounce **v**.

Examples for German: wort, Gewehr,
waffe, Gewicht.
ewig,

In Spanish the labiodental fricative **v** occurs occasionally for *f* before voiced consonants, as in *Afganistan, dafnina.*

Labiodental Breathed Fricative **f**, *fife* **faɪf**.

English **f** is produced in about the same way as its voiced mate **v**, except that the vocal cords do not vibrate.

Examples for English: force, defend, cough,
frisk, affair, rough,
fetch, phone, half,
fifty, pheasant, ruff.

In Italian **f** is often geminated or doubled.

Examples for Italian: fido, infelice, muffa,
fra, nefario, affare,
futuro, ninfa, beffa.

French *f* is sounded in the word *neuf* when the word occurs as the final of a sentence: *en voilà neuf,* **ɑ̃vwala nœf**; when it indicates a date: *le neuf Janvier,* **lə nœf ʒɑ̃vje**.. *f* is sounded **v** before a vowel or a silent *h, neuf ans* **nœ-vɑ̃**, *neuf heures* **nœ-vœ:r**;*f* is silent before a consonant, *Neuf-château,* **nœ ʃato**, or before a so-called *"h aspiré" neuf homards,* **nœ ɔmɑ:r.**

Examples for sounded **f**: chef, tarif, serf, récif, naif,
soif, bref, oeuf, franc, force, effort,
phare, grief, etc.

Examples for silent *f:* clefs, boeufs, oeufs,
nerf, chef-d'oeuvre, etc.

In German **f** is represented by the letters *f* and *v*.

Examples for German: Fest, Affe, Vater,
Feind, Griffel, Volk,
Gefühl, schief, Vogel.
Pfund, Kupfer,

Examples for Spanish: falta, forma, alfabeto, fácil.

Class 5. Laryngeal Consonants

Sub-Class 1. Glottal Stop **ʔ**.

A complete glottal stop **ʔ** is produced by (1) placing the vocal cords in contact with each other so as to close the glottis or opening between the cords, (2) by forcing the breath outward from behind the cords so as to explode or break through the stoppage. The veil is usually up and the other organs of speech in neutral position. The vocal cords do not vibrate. In many languages, such as Arabic, Danish and various Amerindian languages, **ʔ** plays a very important role. Words are often differentiated by it and meanings distinguished.

In German, although the current orthography has no especial letter or symbol in general use representative of the glottal stop **ʔ**, this sound is nevertheless freely used by large portions of the population as a fashion of utterance or mode of emphasis. The sound occurs initially and medially, especially before strongly stressed vowels at the beginning of words and syllables. It is more frequently heard in North and Middle Germany than in the South. Usage as to **ʔ** varies greatly in German and the sound is relatively unimportant for the singer.

The singer should avoid the use of the glottal stop under all circumstances. He should learn to begin the utterance of an initial vowel, whether stressed or unstressed, postpausal, or medial, with a new breath-impulse, when required, without using either the glottal stop **ʔ** or the glottal fricative on-glide **h**.

Sub-Class 2. Glottal Fricative **h**, *house* **haʊs**.

The ordinary or typical glottal fricative **h**, as in *hot* **hɔt**, is produced by the expulsion of breath through the cartilage or cord glottis during the gradual approach or gradual separation of the arytenoid cartilages or of the vocal cords. The other organs of speech, above the glottis, are, or at least may be, neutral. The veil is up. The vocal cords do not vibrate. Having no held position, or tenure, **h** is thus a fricative glide or transition sound, rather than a regular fricative phone: a laryngeal breathed fricative glide. If, while the glottal fricative **h** is being uttered, the vocal cords, for any portion of their extent, approach each other in the manner

requisite for the production of voice, a voiced glottal fricative glide **ɦ** is the result. This voiced sound is often noticeable between vowels, and, in Bohemian, occurs as a regular initial consonant.

In English, **h** usually occurs before a stressed or unstressed vowel as the initial consonant of a word or syllable. When intervocalic, as in *ahead, behold,* **h** is often, though not always, voiced. In English dialect omission or inclusion of **h** in stressed words occur to a surprising extent. The letter *h* is silent, as in *heir, hour, honest, herb, vehement, vehicle, ghost,* etc.

Examples for English:	heed,	behold,	who,
	hear,	behind,	whole,
	heap,	inheritance,	history,
	horrible,	hedgehog,	herald.

In standard Italian, **h** does not occur. In the vulgar dialect of Tuscany, Italian **k**, whenever intervocalic (and not geminated), is pronounced **h** or as a mixture of glottal **h** and velar **x**. Singers should avoid this usage. The letter **h** in the current Italian spelling is silent.

In standard French, **h** occurs only in certain interjections, as *aha;* and occasionally intruded between vowels for emphasis, clearness or the like. The letter *h,* in the current French spelling, is thus almost always silent, but before divers words which are still currently written with an initial *h* that nowadays represents only a former or dialectic usage there is no free or invariable linking of the final consonant or elision of the final vowel of a preceding word, as in *les heros* **lɛ ero**. In Normandy, Lorraine, Gascony, and Bearn **h** is a sound in frequent use.

In German, **h** occurs somewhat as in English, initial in words or syllables. It is said to differ from the English **h** in being more distinct and in having less tendency to die away during its glide into the following vowel. When intervocalic, German **h** is, like the English, somewhat voiced. The letter *h* in the current German orthography, is often silent, serving merely as a sign that the preceding vowel is long, as in *Ihr, Ohr, gehen, Kühn,* etc.

Examples for German:	Hafer,	Holz,	Abhang,
	Herr,	Horn,	Roheit.

In the current spelling of Spanish the letter *h* is silent, as in *hablœr, hombre.*

CHAPTER XII

Vowels

Vowels are usually classified by reference to the tongue, lips and soft palate, for it is by means of the action and relative position of these organs that the changes are effected which modify the laryngeal tone or voice, essential to all vowels. The vowels may be organically classified under nine chief headings:

1. High-Front.
2. Mid-Front.
3. Low-Front.
4. High-Mixed.
5. Mid-Mixed.
6. Low-Mixed.
7. High-Back.
8. Mid-Back.
9. Low-Back.

Each of these vowels may be either close or open, labialized or unlabialized, nasalized or unnasalized, thus increasing the number. Vowels made by intermediate tongue positions, by tongue-lip modifications or by abnormal degrees of lip-rounding, add still further to the possible number of vowels. The variety is indeed indefinitely great, but the number of vowel types, and the corresponding symbols, is for practical purposes limited to a convenient number.

Class 1. High-Front Vowels.

Sub-Class 1. Unrounded Vowel **i** *machine.*

The vowel **i** is produced by raising and slightly advancing the middle of the tongue from the neutral position toward the vault or top of the hard palate. The tongue-tip is neutral and rests just back of the lower front teeth. The English vowel sound of **i** in meet, machine, etc., is, in the usage of many speakers a diphthong. In singing English the use of the diphthong should be avoided, and also the use of the long close **i:** as in French *dire, vie,* or the long open **ɪ:**, as in English *dear, mere.* The singer is advised to pronounce such words as *key, thee,* with a pure vowel intermediate between **i** and **ɪ** without any diphthongal tendency or appreciable vanish. It is represented in the current English spelling by *i, ie, e, ei, ea, ee.*

Examples for English:	police,	creek,	zeal,	key,
	eat,	heap,	knead,	people,
	eel,	teeth,	feast,	seize,
	feet,	meat,	reap,	piece,
	deem,	lean,	sea,	grief.

For the production of the pure vowel **i** of Italian, French, German and Spanish, the middle of the tongue is raised slightly higher toward the hard palate, and is more tense than for English. In these languages, it is a pure vowel and must be carefully enunciated by the English singer, so as to avoid the sound of **ɪ**, as an on-glide, or of **j** as an off-glide. In Italian and Spanish, a variety of **i**-sound occurs when unstressed and followed by another vowel. This sound has a slight audible friction resembling the fricative consonant **j** and may be called a semi-vowel. The semi-vowel **ĭ** is often transcribed by **j**, but for singing may be more precisely transcribed by **ĭ**, thus Italian, *ieri* **ĭĕri**; Spanish, *hierba,* **ĭɛrva.**

Examples for Italian **i**: libro, primo, ricolto,
dico, lire, antichi,
vergini, filo, venissi,
ĭ: ieri, coiaio, miei, piange,
noia, tiene,

Examples for French: ici, gris, difficile, hymen,
midi, six, plier, virgule,
frit, vie, gui,

Examples for German: Ihm, Biene, Lied,
die, wie, mir,
Thier, dir.

Examples for Spanish: **i** libro, bicho, cortina,
silla, mira, iris,
ĭ hierba, fiador, diccion.

Sub-Class 2. High-Front—Close Rounded Vowel **y** *une* **yn**.

The vowel **y** is produced in the same way as **i**, but with rounding of the lips similar to that for **o**. This lip-rounded **i** does not occur in English, Italian or Spanish. It may be acquired by uttering **i** continuously, while alternately rounding and unrounding the lips, thus: **iy, iy, iy**.

Examples for French: une, juste, futur,
but, rupture, multitude,
dur, fortune, murmure.

German **y** is long or half-long. In the current spelling it is usually written ü or üh in open syllables.

Examples for German: Kühn, Flügel,
Bühne, früher,
über, trübe.

Sub-Class 3. High-Front Open Unrounded Vowel **ɪ** *it* **ɪt**.

The vowel **ɪ** is produced by raising and slightly advancing the middle of the tongue toward the top of the hard palate. The rise and advance of the tongue is slightly less than for **i**. The English **ɪ** occurs long before **r** as

in *dear, seer,* and short as in *sit, sieve, busy, build, women, hymn.* In speaking, the vowel **ɪ** when followed by *r* is usually a diphthong, thus: *dear,* **dɪːə**. The singer should avoid the diphthong, and use the **ɪːɪ** pronunciation, with the long pure vowel and the point-stroke **ɪ**.

In German, the vowel **ɪ** occurs only short. The vowel does not occur in Italian, French, or Spanish.

The vowel **ɪ** is misnamed "Short *i.*" As all vowels can be sung on long or short notes, the singer should keep the distinctive quality of the vowel on any high pitch or length without change. **ɪ** forms the vanish of the English diphthongs **aɪ, eɪ, ɔɪ** as in *thine,* **ðaɪn**, *laid,* **leɪd**, *boy,* **bɔɪ**, The substitution of **i** for **ɪ** must be carefully avoided.

Examples for English:	bit,	grist,	link,	nymph,	sylph,
	imp,	pick,	mill,	ridge,	trim,
	ditch,	fizz,	which,	chill,	thistle.
Examples for German:	ich,	wird,	Spinne,		
	Ring,	ein,	Tisch.		

Sub-Class 4. High-Front—Open Rounded Vowel **Y**, Hütte **'hYtə**.

The vowel **Y** is produced in the same way as **ɪ** but with rounding of the lips. It occurs in German where it is always short. In the nomic spelling it is usually represented by the letter ü, when this letter is followed by a double consonant or by a combination of consonants, as in *dünn, Glück, Sünde.* **Y** is the second element of the diphthong **ɔY**, as in *euch,* **ɔYç**.

Y does not occur in English, Italian, French or Spanish.

CLASS 2. MID-FRONT VOWELS.

Sub-Class 1. Mid-Front-Close Unrounded Vowel **e** as in *vacation,* **ve'keɪʃən.**

The vowel **e** is produced by raising and advancing the middle of the tongue toward the top of the hard palate. But the rise and advance of the tongue for **e** is less than for **ɪ**, and **e** is thus more open and lower than **ɪ**. The pure vowel **e** often occurs in English under subordinate stress, as in *aerial, chaotic.*

The vowel-sound of *say, made, obey,* when strongly stressed, is a diphthong composed of **e** and **ɪ**, the second element or vanish, being always short. In the usage of many, this diphthong is composed of **ei**, **ɛe**, or **ɛɪ**. The singer should avoid the substitution of the open **ɛ** as in *let,* or **ɛː** as in *air,* or the pure close **e** of French *été,* for the first element of this English diphthong. He is advised to use a pure vowel intermediate in quality be-

tween the **e** of French *été* and the English **ɛ** of *led*. When greater accuracy is desired, the sound may be transcribed **eᵀ**, **veᵀ'keᵀɪʃən**.

Examples for English: vacate, ale, gate, yea,
vacation, bale, staid, hail,
fatal, fate, jail, jade,
chary, race, Kate, patriot,
chaotic, cane, great.

In Italian, **e** occurs as a pure vowel, long under strong stress, and short under weaker stress.

Examples for Italian: perchè, selve, vedere,
che, sete, sera,
paese, per, pere.

In French, **e** occurs only short, except in a few semi-foreign words. It occurs only as a pure vowel without the vanish of a diphthong. **e** is currently written *é* as in *dégénéré,* **deʒenere**, *clef,* **kle**, *chanter,* **ʃãte**, *marchez,* **marʃe**, *j'ai,* **ʒe**, etc.

Examples for French: déja, gaîté, rez, panier,
pré, essayer, parlez, tablier,
quai, danser, effet, escalier.
et, cahiers, essai,

In German, **e** is long under strong stress.

Examples for German: eben, Beet, Segel,
See, Ehe,
Reh, Kehle.

The Spanish *e*-sound is intermediate in quality between the close **e** of French *été,* and the open **ɛ** of English *let,* and may be more precisely transcribed **eᵀ**.

Examples for Spanish: pecho , pena, este , decir,
menos, cabeza, saqué, queso.

Sub-Class 2. Mid-Front-Close Rounded Vowel **ø** *peu* **pø**.

The vowel **ø** is produced in the same way as the pure vowel **e** ,but with rounding of the lips similar to that for **o**. The English-speaking singer should be careful to avoid adding the vanish of the diphthong as described for English **eᵀ** when uttering this vowel. **ø** does not occur in English, Italian or Spanish. It may be acquired by uttering **e** continuously while alternately rounding and unrounding the lips, thus: **eø**, **eø**, **eø**. It is nominally written *eu* as in *veut,* **vø**, *feu, noeud,* **nø**, etc.

Examples for French: peut, jeu lieu, bleu,
eux, queue, 'nəɪppieux.

In German, **ø** is long under strong stress.

Examples for German: Schön, Röslein, Köder,
Höhle, böse, Möwe.

ø does not occur in English, Italian or Spanish.

Sub-Class 3. Mid-Front-Open Unrounded Vowel **ɛ**, *let,* **lɛt**.

The vowel **ɛ** is produced by raising and slightly advancing the middle of the tongue toward the top of the hard palate, but in a slightly less degree than for **e**. In English the vowel is usually short as in *health, any, next,* etc.; but it also occurs long, before *r,* as in *dare, there.* Instead of the long **ɛː** as in *there,* **ðɛːɹ**, many speakers use a diphthong, **ɛə**, thus: **ðɛːə**. The singer should use the long pure vowel **ɛː** and avoid the diphthong.

Examples for English:	**ɛ**	end,	dent,	yes,
		bread,	guest,	fret,
		lest,	hell,	zest,
		well	friend,	guess,
	ɛː	air,	dare,	hare,
		bare,	rare,	fair,
		mare,	share,	care,
		heir,	stair,	wear.

Italian **ɛ** occurs usually under strong stress, as in *verbo.*

In Italian, the letter *e* in a final unstressed syllable, is a sound intermediate in quality between **e** and **ɛ**. This sound may be more precisely transcribed by **eᵀ**, as in *mare,* **ˈmareᵀ**, *bene,* **ˈbɛneᵀ**.

Examples for Italian:	bello,	tempo,	cielo,	destro,
	ecco,	gemma,	tiene,	queta,
	terra,	festa,	viene,	ferro,
	poeta,	resto,	remo.	

French **ɛ** is produced about the same as English **ɛ**. It may be either short or long: *très,* **trɛ**, *bête,* **bɛːt**, *grasseyer,* **grasɛˈje**, *est,* **ɛ**, *sujet,* **syˈʒɛ**, *succes,* **sykˈsɛ**, *aspect,* **asˈpɛ**.

Examples for French:	être,	mais,	chaise,	les,
	père,	glaive,	soleil,	mes,
	reine,	dais,	veine,	des.
Examples for German:	Bett,	Herr,	Sänger,	
	Berg,	Jäger,	zählen,	
	Herz,	fern,	Dächer.	

The Spanish **ɛ**-sound is of frequent occurrence and is written in the current spelling of Spanish in closed syllables, as in *cerro, guerra, verbo, atento, selva,* etc.

Sub-Class 4. Mid-Front-Open Unrounded Nasal Vowel **ɛ̃**, *vin,* **vɛ̃**.

The French vowel **ɛ̃** is produced in the same way as **ɛ**, but with the soft palate or veil in the lowered or more-or-less neutral position, somewhat as during ordinary breathing through the nose while the mouth is closed. The

vowel is thus modified by the resonance of the nose-cavities. This and other nasalized vowels do not occur normally in English, German, Italian and Spanish.

The singer should be careful to keep this nasalized vowel pure, whether on long or short notes, and not to pronounce neighboring letters, or intrude additional consonants. Thus the *n* in *indigne, lynx, printemps,* and the *m* in *simple, symbole,* should not be pronounced at all, and the articulation of the consonants **d**, **p**, **b**, **t**, and **k** which follow the nasalized **ɛ̃**-vowel in these words, should not be prematurely begun during the emission of the preceding **ɛ̃**-vowel; nor should the consonants themselves be nasalized.

Pronounce *indigne* **ɛ̃'diɲə**, instead of **ɛ̃n'diɲə**.
Pronounce *lynx* **lɛ̃ks**, instead of **lɛ̃ŋks**.
Pronounce *printemps* **'prɛ̃tɑ̃**, instead of **'prɛ̃ntɑ̃**.
Pronounce *symple* **'sɛ̃pl**, instead of **'sɛ̃mpl**.
Pronounce *symbole* **sɛ̃bɔl**, instead of **sɛ̃mbɔl**.
ɛ̃ occurs only in French.

Sub-Class 5. Mid-Front-Open Rounded Vowel **œ**, *peur* **pœ:r**.

The vowel **œ** is produced in the same way as **ɛ**, but with rounding of the lips similar to that for **ɔ**. This lip-rounded vowel **œ** does not occur in English, Italian or Spanish. It may be acquired by uttering **ɛ** continuously, while rounding and unrounding the lips, thus: **ɛœ, ɛœ, ɛœ.**

Examples for French:	peur,	jeune,	soeur,	recueil,
	oeil,	oeillet,	oeuvre,	peuple,
	coeur,	deuil,	neuf,	aveugle,
	veuve,	feuille,	fleuve.	

In German, this open **œ**-sound occurs as in *Götter, Hölle, Mönch, Töchter, Rösslein, Goethe.*

Sub--Class 6. Mid-Front-Open Rounded Nasal Vowel **œ̃**, *un.*

The vowel **œ̃** is produced in the same way as **œ**, but with the soft palate in the lowered position, thus affording nasal resonance. It does not occur in English, Italian, German or Spanish.

Examples for French:	chacun,	défunt,	lundi,
	humble,	brun,	aucun.

CLASS 3. LOW-FRONT VOWELS.

Sub-Class 1. Low-Front-Close Unrounded Vowel **æ**, *at,* **æt**.

The vowel **æ** is produced by raising the middle of the tongue toward the top of the hard palate, but not quite so high as for **ɛ**. The tip of the tongue rests against the inner surface of the gums of the lower front teeth. In English **æ** is normally short, as in *sat, hand, act.* By many speakers **æ** replaces the vowel **ɑ** in *bath, class, dance,* etc., especially in the United States.

In French it occasionally replaces **a** in *patte, dame,* etc., but the singer is advised to use **a** instead of **æ** for French.

Examples for English: at, flap, camp, map,
act, pad, crash, nag,
bank, glad, tramp, wax,
drag, rant, land, rattan.

æ occurs only in English.

Sub-Class 2. Low-Front Open Unrounded Vowel **a**, *ask* **ask.**

The vowel **a** is produced by slightly raising the middle of the tongue toward the top of the hard palate. The tip of the tongue rests lightly against the inner gums of the lower front teeth. The lips are neutral. In the United States **æ** is used by many speakers instead of **a** in *class, bath,* etc. The proper use of **a** distinguishes a careful speaker. In English **a** is the first element of the diphthong, as in *eye* **aɪ**, *mine* **maɪn**, *thy* **ðaɪ**, etc. When the word *wind* rimes with *kind, find, behind,* etc., it is pronounced **waɪnd**; in all other cases **wɪnd**.

Examples for English **a**: aft, past, task, glass,
mask, answer, cask, path,
bath, daft, vast, fancy,
branch, graft, lance, laugh.

aɪ: buy, pie, high,
try, kite, higher,
dye, lie, mire,
fly, die, aisle.

In French, **a** occurs as in *patte* **pat**, *voir,* **vwa:r**, *loyal* **lwa'jal**, *toi* **twa**, *part* **par**, etc. It is written (exceptionally) with the circumflex accent in verbal endings, as in *nous parlâmes* **nu parla:m**, etc., and in the combinations *emm, enn,* as in *récemment* **resamã**, *constemment, prudemment, hennir, nenni, solennel,* etc. **a** is the second sound represented by *oi* and *oy,* as in *toile, royal,* etc.

Examples for French: sac, haricot, cahier, roi,
hache, matin, brave, poire,
drap, chat, voyage, voyelle.

In Spanish, the *a*-sound is a vowel intermediate between the low-front vowel of French *patte* and the low-back French *pas;* when preceded or followed by a velar sound the *a* resembles the **ɑ** in *pas.*

Examples for Spanish **a**: nalga, hablar, silaba,
caro, gasto, cortar,
casto, anima, amar.

ɑ: bajo, pago, majo.
jarro,

Class 4. High-Mixed Vowel

High-Mixed-Open Unrounded Vowel ɪ, *pity* **'pɪtɪ**.

The vowel ɪ, represented in English by the *y* in *pity*, by the first and the third *i* in *illicit*, by the *e* in *enough*, is produced by raising the tongue vertically to about the height for ɪ, while keeping the middle of the tongue level or flat. The tongue position of ɪ is intermediate between that of ɪ, **e**, and ə.

The mixed vowel ɪ occurs normally only under weak stress. It is ordinarily of short duration and is often referred to as being of "obscure" quality. It does not occur in Italian, French, German or Spanish. The vowel ɪ, should be used instead of ə in *April, foreign, evil, enough, added, roses*, etc. In singing, especially in words from the Bible or in words from poetry, the vowel **e**, ə or **ɛ** are often substituted for ɪ. The singer is advised to use a vowel intermediate in quality between ɪ and **e** and use the symbol ɪ or ɪ˥ to represent the sound, thus: *blessed* **blɛsɪd**.

Examples for English ɪ: city, ladies, delay, senate, furnace,
lady, roses, divine, college, forest,
pity, added, despised, courage, mountain,
beloved,
lovest,
loveth.

Class 5. Mid-Mixed Vowel

Mid-Mixed-Close Vowel ə, *sofa* **'sofə**.

The vowel ə is produced by raising the middle of the tongue toward the top of the hard palate to about the height for **o** or **e**, while neither advancing it for **e** or retracting it as for **o**. The lips are neutral. The sound does not occur in English under strong stress, but usually only in weak syllables; ə varies slightly in quality according to the text letter which it represents and its position in a word, initial, medial or final. Thus the final unstressed vowel in *doctor, singer, briar, murmur, fakir, martyr*, and the initial syllable in *again, attain, offends*, should not vary too much toward the clear quality, but resemble as closely as possible the vowel recognized as correct in standard speech, which is generally ə. In singing and in dignified declamation words such as *from, for, to, was, that, than, some, should, can*, etc., should retain their full form and the clear quality of their vowels rather than the ə-vowel or the pronunciation *frm, fr, wz, kn*, etc., of colloquial speech. In singing it is not permissible to give full tonal value or prolonged duration to a syllabic consonant, such as the **l** in *battle*, **'bætl**, or the *n* in *sudden*, **'sʌdn**, etc. The singer must interpolate a vowel to carry a tone capable of the proper resonance and duration, thus: **'bætəl**, **'sʌdən**. A syllable of this sort should (1) always be written to

a very short note. (2) never be written on an accented beat of the measure, and (3) always be set to a note lower in pitch than the surrounding syllables. The vowel **ə** is usually called the "obscure" vowel or the "neutral" vowel.

Examples for English:	abide,	consistent,	vessel,	china,
	again,	moment,	savior,	ornament,
	against,	method,	savor,	lesson,
	upland,	serial,	comma,	problem,
	comparable,	centre,	sofa,	librarian,
	carol,	miserable,	briar,	arrogance,
	chosen,	memorial,	elixir,	kingdom,
	harbour,	factor,	madam,	honour.

ə does not occur in Italian.

In French, the sound represented in this and in many other books as **ə** is not in reality the same as the English mid-mixed-close unrounded vowel, but a mid-mixed-open (but somewhat frontal) rounded vowel. It occurs only under weak stress and short duration, as in *petit* **pə'ti**, *menu* **mə'ny**, *recevoir* **rəsə'vwa:r**, etc.

Faure, the celebrated barytone, whose singing diction was impeccable, writes in his "Treatise on Pronunciations": "Another fault which we observe, principally among women, and which is tainted with ridiculous affectation, consists in replacing the mute *e* [**ə**] with *eu* [**ø**]."

Comme une demoisel-leu
Il me trouverait bel-leu.

"One cannot sufficiently protest against such usage, which at times renders the words unintelligible, offends the taste, and transforms the French language, so varied, so rich in tone quality, into a wretched gibberish." [Translation.]

"Un autre défaut de prononciation qu'on observe principalement chez les femmes, et qui de plus, est entaché d'une préciosité ridicule, consiste a remplacer les *e* muets par *eu*." [Examples, etc.]

"On ne saurait trop s'élever contre l'usage de tels procédés qui rendent parfois la parole inintelligible, offensent le gout et font de la langue française si varié, si riche en timbres de toutes sortes, un miserable charabia."

In singing and in dignified declamation the sounding of the vowel **ə** is considered correct in French, and somewhat the same rules as for the English unstressed obscure vowel should be observed by both composers and singers.

In some cases in which the "mute *e*" is silent in ordinary speech, it is sounded in singing and on the stage, thus: *arbre* is spoken **arbr** and sung **'arbrə**; *appeler*, spoken **a'ple** and sung **apə'le**, etc. In singing, such

syllables should be made extremely short, as in the case of plural nouns such as *mesdames* **medamə** and of verb-endings such as those of *aimes, donnent,* which are pronounced in singing. The verb *content* (they relate) is pronounced **'kɔ̃tə**, but the adjective *content* (to be content), though written the same, is pronounced **kɔ̃tɑ̃**.

Examples for French: le, que,
me, grenade,
de, menu.

In German, unstressed **ə** occurs only in weak syllables, as in *Gedanke,* **gə'daŋkə**; the sound is about the same as that of the English vowel **ə**, but is not quite so "obscure" in quality, shading slightly toward **e**. Some singers in South Germany use a clear **ɛ** or **e**, and in North Germany the sound occasionally varies toward **a**, *Berliner,* **bɛr'linɑ**. The singer should avoid both extremes and pronounce **ə**.

Examples for German: hatte, lassen, Kleider,
Goethe, Männer, nehmet,
leise, Gericht,

ə does not occur in Spanish.

CLASS 6. LOW-MIXED VOWEL

Low-Mixed-Close Vowel **ɐ**, *urge* **ɐ:ɹdʒ**.

The English vowel **ɐ** is produced with the tongue in a position similar that that for **ə**, but somewhat lower. This vowel occurs before *r,* under strong stress, as in *urge, bird, world, err, myrtle, learn,* etc. It occurs both long as in *fur,* and half long or short, as in *furry, courtesy, turkey, purple,* etc. It is sometimes lip rounded. This sound does not occur in French, Italian, German or Spanish.

Examples for English:	urn,	work,	person,	pearl,
	burnt,	worth,	mercy,	heard,
	hurt,	word,	proverbial,	search,
	curt,	worm,	service,	courtesy
	burr,	worthy,	girl,	myrtle,
	scurry,	further,	first,	scourge.
	kirk,	worry,	girth,	

CLASS 7. HIGH-BACK VOWELS

Sub-Class 1. High-Back-Close Rounded Vowel **u**, *whoever* **hu'ɛvəɹ**.

The vowel **u** is produced by raising the posterior or back part of the tongue toward the veil, or soft palate, the middle and front portions of the tongue sloping downward and forward; the tongue-tip lies slightly retracted from the lower front teeth, where it rests during the production of the front vowels. The lips are well rounded. The vowel **u** is thus a

high-close postero-linguo-velar bilabial vowel, differing from the postero-lingualized bilabial fricative consonant **w** chiefly in not possessing the lip fricative element which characterizes the **w**. The vowel **u** is, especially when non-syllabic, as in many diphthongs and triphthongs, often confounded with the fricative consonant **w**.

The vowel sound of English *boot, shoe, rude,* etc., is, in the language of many speakers, a diphthong, **ʊu**. In singing English the use of the diphthong should be avoided and also the long close **u:** of French.

Examples for English: Louise, cruel, move, through, room,
sluice, feud, beauty, tour, root,
whose, new, cruise, wound, route.
tune, view, lose, use,
lute, neuter, few, who,

For the production of the pure vowel **u** of Italian, French, German and Spanish the back of the tongue is raised slightly higher toward the soft palate than for English. In these languages it is a pure vowel.

In Italian and Spanish, a variety of **u**-sound occurs when unstressed and followed by another vowel. This sound has a slight audible friction resembling the fricative consonant **w** and may be called a semi-vowel. The semi-vowel **ŭ** is often transcribed with **w**, but for singing may be more precisely represented by **ŭ**, thus: Italian, *guado* '**gŭadoˈ**; Spanish, *cuatro* '**kŭatrɔ**.

Examples for Italian **u**: una, virtù, spugna,
giù, bruno, grumo,
mura, muso, luna,
lui, puro, nume,
tutti, uva,

ŭ: uomo, quinto,
tuoi, guizzo,
guado, sguardo.

In French, **u** is a pure vowel, produced as for English, but more uniformly close and without any appreciable vanish. It is written *ou* or *oû* and may be short or long.

Examples for French: sou, foulard, jour, choux,
août, épouse, amour, toux,
goût, nouveau, bijou, coup,
pouce, Lourdes, roue, doute.

In German, **u** occurs either long or half-long.

Examples for German: thun, Flut, gut,
Ruhm, Schule, Huzar,
Stube, du, ruhe.

Examples for Spanish **u**: cura, luna, mucho,
luz, dulce, cuchara.

ŭ: fuerza, fatuo,
cuatro, cuan.

Sub-Class 2. High-Back-Open Rounded Vowel **ʊ**, *bull* **bʊl**.

The vowel **ʊ** is produced by raising the back of the tongue toward the veil or soft palate, as for **u**, but not as high. The English **ʊ** is usually short, as in *full, wood, wolf, should;* but it also occurs long, before *r,* as in *poor, sure, your.* The long pure vowel is used in singing, thus: *poor,* **pʊːɹ**; in speaking, the vowel is usually a diphthong and the *r* is not sounded **pʊːə**. In certain words **ʊ** is used by many persons instead of **u**, as in *room, broom, spoon, roof, food.* This usage is to be avoided. **ʊ** forms the second element of the diphthong, as in *out* **aʊt**, *house,* etc.

Examples for English: pull, sugar, cure, woman,
put, bullion, could, book.

In German, **ʊ** occurs short in closed syllables.

Examples for German: Hund, Luft, Mutter.
Pfund, Wunsch,

ʊ does not occur in French, Italian or Spanish.

CLASS 8. MID-BACK VOWELS

Sub-Class 1. Mid-Back-Close Rounded Vowel **o**, *poetic* **poˈɛtɪk**.

The vowel **o** is produced by raising the back of the tongue toward the veil or soft palate; the middle and front portions of the tongue slope downward and forward; the tongue-tip lies slightly retracted from the lower front teeth, where it rests during the production of the front vowels. The lips are rounded, but the lip-rounding for **o** is slightly less than for **u**. In normal English speech this pure lip-rounded **o** occurs only under subordinate stress, as in *poetic, vocation,* etc. The English sound of *note, toe, soul, blow* is followed by a short sound in closing, which suggests the vanish of a diphthong composed of **o** and **ʊ**, the **ʊ** being always short. By many speakers this sound is a diphthong **ɔo**. The singer should avoid the substitution of either **ɔ**, as in English *door,* and also the close **o**-sound of French **o**, as in *tôt.* He is advised to use a long, pure vowel intermediate in quality between the French **oː** as in *rôle,* German *Sohn,* Italian *come,* and the English **ɔ** as in *door.*

Examples for English: window, foam, quote,
poetic, dough, known,
locomotion, hold, loan,
probate, woe, boast,
pronoun, joke, goal.

In Italian, **o** occurs under strong stress, both short, as in *tomba,* and long, as in *sole.* The lips are slightly less rounded than for English **o**, and the tongue and lips remain in the same position for the entire duration of the sound. The English speaking person is especially advised to keep this sound pure in singing Italian, French, German, and Spanish.

The final unstressed *o* is a sound intermediate in quality between **o** and **ɔ** and may be more precisely transcribed by **oᵀ**, thus *corto* '**kortoᵀ**.

In Spanish, **o** occurs in open syllables.

Examples for Italian: come, risponda, dolci,
nome, ore, dove.
croce, fiori,

French **o** is written *o, ô, eau, au.*

Examples for French: tôt, chôme, fauche, gros,
peau, émotion, eau, dossier,
beau, rosier, vôtre, grossier,
nos, notion, couteau. bravo.

German **o** is generally written in open syllables, as in *Wo, oder,* and when followed by a silent *h,* as in *wohl, kohle,* etc.

Examples for German: so, Hof, Ohr,
oben, Wohnung, Vokal,
Ton, loben, Strom.

The Spanish **o**-sound is a vowel intermediate in quality between the Italian **o** as in *come* and **ɔ** as in *modo.* It occurs in the current spelling of Spanish in open syllables and under strong stress.

Examples for Spanish: boda, moral,
rosa, coche,
noche, esposa,
oro, rosa.

Sub-Class 2. Mid-Back Open Unrounded Vowel **ʌ** *but* **bʌt**.

The vowel **ʌ** is produced by raising and retracting the back of the tongue toward the soft palate, with the middle of the tongue more or less flat. **ʌ** and **ɐ:** are often confounded, as in *hurry* '**hɐ:rɪ**, *worry* '**wɐrɪ**, *borough,* '**bɐro**.

The vowel **ʌ** does not occur in Italian, French, German or Spanish. **ʌ** is usually represented in English by *u, o, oo,* in stressed syllables.

Examples for English: bud, jump, tongue, one,
dust, pumice, come, comely
bump, vulture, dove, blood,
fuss, subject, other, flood.

Sub-Class 3. Mid-Back-Open Rounded Vowel **ɔ**, *door*.

The vowel **ɔ** is produced by raising and retracting the back of the tongue toward the soft palate, and by slightly rounding the lips. The rise and retraction of the tongue is less than for **o**.

In English, **ɔ** occurs under strong stress, before *r*, short under subordinate stress, as in *obey*. The singer should avoid the use, in English, of the long close **o:** of Italian, French, and German, especially before *r*. The singer should carefully distinguish the mid and low back English vowels, as follows:

ɔ in obey,
ɔ: in bore, door more,
c: in awl, tall dawn,
ɑ in balm, arm, chart,
ɐ in hot, God, soft,
ɐ: in gone,

ɔ is the first element of the English diphthong represented by *oi* in *oil*, and by *oy* in *boy*.

Examples for English: **ɔ**. obey, bore, **ɔɪ** hoist, foil,
more, course, voice doily.
boar, fort,
floor, port,

Italian **ɔ** occurs short as in *donna*, '**dɔn:ɑ**, *osso*, '**ɔs:o**$^{\intercal}$, and long as in *buono*, '**bŭɔ:no**$^{\intercal}$, *fuoco*, '**fŭɔ:ko**$^{\intercal}$.

Examples for Italian:

poveri, posa, suoi,
orso, oca, lode, tuono,
cornice, odio, corpo, fuoco,
voglio, nostra, sonno, uomo,
oggi, cosa, scorta, buono,
gloria, puó, oro,
modo,

French **ɔ**, is a vowel intermediate in quality between Italian **o** in *come*, and **ɔ** in *buono*. It occurs long in *robe*, **r'ɔ:b**, and short as in *coq*, **kɔk**.

Examples for French: essor, dot, force, orange,
tort, donner, fort, oral,
pomme, corne, loge, octroi,
abord, corps, noble, vocal.

In German, **ɔ** occurs as in *Gott*, **gɔt**, etc., and as the first sound in the diphthong **ɔY**, as in *heute*, '**hɔYtə**, *Fräulein*, '**frɔYlaɪn**, etc.

Examples for German: Post, Nonne, Gott,
Mord, Locken, Kopf,
Spross, Wolke, hoffen.

Examples for Spanish: costa, amor,
optimo, flor,
costura, favor,
sordo, monte.

Sub-Class 4. Mid-Back-Open Rounded Nasal Vowel **ɔ̃**, *bon,* **bɔ̃**.

The nasal vowel **ɔ̃** is a vowel intermediate in quality between **o** and **ɔ** but with the soft palate in the lowered position, thus giving the vowel nasal resonance. The singer should be careful to keep this nasalized vowel pure, whether on long or short notes, and not to pronounce neighboring letters or intrude additional consonants. Thus, the *m* in combat, or the *n* in *monde* should not be pronounced at all, and the articulation of the consonants **p**, **k**, **g** or **ʒ**, which follow the nasalized **ɔ̃** in the words, *tromper, fonction, longueur, plonger,* should not be prematurely begun during the emission of the preceding vowel; nor should the consonants themselves be nasalized.

Pronounce *monde* '**mɔ̃də**, instead of **mɔ̃ndə**.
Pronounce *combat* '**kɔ̃ba**, instead of '**kɔ̃mba**.
Pronounce *tromper* '**trɔ̃pe**, instead of '**trɔ̃mpe**.
Pronounce *fonction* '**fɔ̃ksjɔ̃**, instead of '**fɔ̃ŋksjɔ̃**.
Pronounce *plonger* '**plɔ̃ʒe**, instead of '**plɔ̃ŋʒe**.
Pronounce *longueur* '**lɔ̃gœːr**, instead of '**lɔ̃ŋgœːr**.

The **ɔ̃**-sound does not occur in English, French, German or Spanish.

Examples for French: bon, comble, tombe, onze,
bond, tombeau, annonce, longue,
congé, plomb, nom, confort.

CLASS 9. LOW-BACK VOWELS

Sub-Class 1. Low-Back-Close Rounded Vowel **ɔ**, *law,* **lɔː**.

The vowel **ɔ** is produced by raising and retracting the back part of the tongue toward the soft palate, and by slightly rounding the lips. The rise and retraction of the tongue for **ɔ** is considerably less than for **ɔ** or **o**, and the lip-rounding is also less. The tip of the tongue rests against the inner surface of the gums of the lower front teeth. The rear wall of the pharynx is often visible when this vowel is being sung, although no conscious effort should be made to depress the tongue at the back, since this would interfere with the larynx.

Examples for English :

awe,	cause,	gall,	haul,	
all,	dawn,	gawk,	hawk,	
aught,	fawn,	gaul,	hall,	
ball,	fall,	gnaw,	jaw,	
claw,	laud,	pause,	vault,	haunt,
call,	maul,	raw,	wrought,	flaunt,
caught,	naught,	spawn,	yawn,	gaunt,
lawn,	pauper,	talk,	yawl,	daughter.

Sub-Class 2. Low-Back-Open Unrounded Vowel **ɑ**, *father,* **'fɑːðəɹ**.

For English **ɑ** the tongue toward the back is low and somewhat retracted from the position of the **a**-vowel. The tip rests against the inner surface of the gums near the lower front teeth. The opening of the jaw is wider for **ɑ** than for any of the other vowels. In singing the vowel, the back wall of the pharynx is often visible. The tongue position for this and for all the other vowels should be held without muscular effort. In English, **ɑ** is usually long when under strong stress. **ɑ** is the first sound in the diphthong **ɑʊ**, as in *house, gown, loud, cow,* etc.

Examples for English :

ɑ arm,	psalm,	**ɑʊ**	gout,	
farm,	guard,		now,	
palm,	harm,		renown,	
card,	jar,		found.	
far,	lark,			

Sub-Class 3.

In Italian, the *a*-sound is a vowel intermediate between the low-front vowel of French *patte* and the low-back vowel of French *pas*. It is produced with the upper surface of the central part of the tongue flat or level, and almost neutral position, neither raised toward the top of the hard palate nor backward toward the soft palate.

Examples for Italian :	padre,	acqua,
	canto,	calamaio,
	accanto,	bassa,
	anello,	Cassa.

French **ɑ** as in *âme,* is produced practically as for English.

Examples for French :	fable,	*âme,*	bas,	gaz,	pois,	
sable,	marron,	flamme,	bât,	cas,	gazon,	mois,
gagner,	jadis,	diable,	*pâte,*	pas,	blazon.	poêle,
esclave,	espace,	noix,	taille,	nation,	topaze,	cloître,
cadre,	miracle,	croire,	paille,	station,	phrase,	
		poids,	haillon,	relation,		

German **ɑ** occurs long as in *Vater, Paar, Jahr, Kahn,* and short as in *Mann, Pack, Kann.* **ɑ** is the first element of the diphthong **ɑʊ**, as in *Haus,* and of the diphthong **ɑɪ**, as in *zwei, Weide, Kaiser.*

Sub-Class 4. Low-Back-Open Rounded Vowel **ɒ**, *not* **nɒt**.

The vowel **ɒ** is produced with the tongue in almost the position for **ɑ**, but the lips are slightly rounded. In America there is a tendency to unround both **ɒ** and **ɔ**, which the singer should avoid. The vowel **ɒ** does not occur in French, German, Italian or Spanish.

Examples for English: off, bottom, loft, yacht, sorry,
odd, rod, shot, God, copy,
hot, mock, fog, dodge, gloss,
knob, dog, prop, rock, soft,
long, thong,
jog, song,
volume, quality,
mob, long.

Sub-Class 5. Low-Back-Open Unrounded Nasal Vowel **ɑ̃**, *dans,* **dɑ̃**.

The nasal vowel **ɑ̃** is produced with the tongue in position for **ɑ**, but with the soft palate lowered, thus giving the vowel nasal resonance. The action of the soft palate makes it difficult to hold the tongue position for **ɑ**, but with practice this can be accomplished without undue muscular action. Exercises for the independent action of the soft palate may be found in Chapter XIII. **ɑ̃** does not occur in English, Italian, German or Spanish.

Examples for French: entend, content, entendant,
empire, flambeau, septembre,
temps, longtemps, sentir.

CHAPTER XIII

Phonetic Exercises in Diction

PRACTICE in diction naturally requires suitable material. The following exercises are presented in somewhat the order in which the general subject has been treated in Part 1, and are to be used by the student for daily practise. These exercises may be considered the practical equivalent of vocalizes.

The teacher will find that from three to five minutes of the singing-lesson thus devoted to training the organs of respiration and of articulation, will augment the student's power to use the vocal cords independently of the other organs, and thereby remove much of the difficulty usually experienced in the free voice-production or emission of tone.

Exercises for Training the Speech-Organs

Respiration: Sensing the breathing-organs; capacity; control.
Tongue-tip and Gums **d**, **t**, **n**, **l**, **r**.
Tongue-tip and Teeth **ð**, **θ**.
Tongue-tip with mid-front vowels **e**, **ɛ**.
Tongue-blade **z**, **s**, **ʒ**, **ʃ**.
Middle of the Tongue and Hard Palate **j**, **ç**, **ɲ**, **ʎ**.
Middle of the Tongue for high-front vowels **i**, **ɪ**.
Lips **b**, **p**, **m**, **w**.
Front Vowels with Lip-rounding **y**, **ø**, **œ**.
Lower Lip and Upper Front Teeth **v**, **f**.
Middle of Tongue for Low and Mixed Vowels **ɑ**, **ɑ**, **c**, **ə**, **æ**.
Low Vowels with Consonants.
Soft Palate Action.
Back of Tongue and Soft Palate **g**, **k**, **ŋ**, **x**.
Back Vowels **u**, **ʊ**, **o**, **ɔ**, **ʌ**, **c**.
Vowels with Nasal Resonance **ɑ̃**, **ɛ̃**, **ɔ̃**, **œ̃**.
r—drill.
General drill.
Difficult consonant combinations.
Speech-Sound Sequences.

Respiration

Breathing is a function which includes two distinct activities, inhalation and exhalation. Correct inhalation, normally and in respose, begins with diaphragmatic action. When the taking in of breath is continued, the expanding force of the chest is exerted by the intercostal and external chest muscles. If carried still further, the upper chest and clavicular muscles are brought into play. Exhalation, in its relation to singing, is breath under volitional control, or the act of controlling the outward flow of the breath and intensifying its effect upon the tone by a sense of seating the muscles of exhalation to that end.

Breathing in relation to singing should be practised as a separate exercise apart from the singing.

Position

The position of the student while practising these exercises should be as follows:

The body firmly poised on both feet, one foot placed slightly in advance of the other. The chest held high without undue muscular effort, and without raising the shoulders. The chest should not change its outlines conspicuously during respiration.

EXERCISE NO. 1

"Sensing" the Breathing-Organs

Inhale slowly (through the nose), sensing the incoming breath only at the diaphragm and ribs. As the diaphragm descends and the ribs expand, mentally count from 1 to 3 at the rate indicated by the metronome set at 40. Without retention of breath, immediately exhale (through the nose), counting as above with a sense of control of the outgoing breath felt only at diaphragm and ribs, as they assume their original position. Repeat this, until it can be done without raising or lowering the chest, without raising the shoulders, without stiffness at the throat, jaw, etc., and without undue muscular effort of any kind. Metronomic accuracy must be maintained in controlling the outflow of the breath, as this is the basis of control in tone emission.

EXERCISE NO. 2

Complete Respiration

INHALE slowly (through the nose), sensing the incoming breath at the diaphragm and ribs. Mentally count from 1 to 3, metronome 40. Continue inhaling, and fill lower, middle and upper chest while counting as above. Without retention of breath, immediately

EXHALE (through the nose) with a sense of control of the outgoing breath felt first at the diaphragm and ribs, then at the lower, middle and upper chest, as the breath is allowed to escape.

Mentally count from 1 to 6, with the metronome set at 40.

EXERCISE NO. 3

Capacity

INHALE slowly (through the nose), sensing the incoming breath only at the diaphragm and ribs. Mentally count from 1 to 3 with the metronome set at 40. Continue and fill lower, middle and upper chest. Count as above. Without retention of breath, immediately

EXHALE slowly, sensing the outgoing breath at the diaphragm and ribs. Mentally count from 1 to 6, metronome 40. Without stopping, immediately

INHALE slowly, sensing the incoming breath only at the diaphragm and ribs. Mentally count from 1 to 7, metronome 40. Without retention of breath, immediately

EXHALE slowly, sensing the outgoing breath only at the diaphragm and ribs. Mentally count from 1 to 8, metronome 56. Without stopping, immediately

INHALE slowly, sensing the incoming breath only at the diaphragm and ribs. Mentally count from 1 to 9, metronome 56. Without retention of breath, immediately

EXHALE slowly, sensing the outgoing breath only at the diaphragm and ribs. Mentally count from 1 to 10, metronome 56.

INHALE as before, mentally counting from 1 to 10, metronome 56, and then EXHALE so as to use all the inhaled breath by counting in a whisper from 1 to 15.

Repeat the inhalation; then exhale, while counting in a whisper from 1 to 20.

Repeat, counting in a whisper from 1 to 25, metronome 56. Always without undue muscular effort of any kind.

EXERCISE NO. 4

Control

INHALE slowly (through the nose), sensing the incoming breath only at diaphragm and ribs. Mentally count from 1 to 3, metronome 40. Continue inhaling and fill lower, middle and upper chest, counting as above. Without retention of breath, immediately

EXHALE slowly, sensing the outgoing breath only at the diaphragm and ribs, while counting in a whisper from 1 to 10, metronome 40. Without stopping, immediately

INHALE quickly and deeply without disturbing the raised chest, sensing the incoming breath only at the diaphragm and ribs. Without retention of breath,

EXHALE as above; without stopping

INHALE as above.

Repeat 3 times. Then, instead of counting in a whisper, count with the speaking voice; and finally, with the singing voice in a tone of easy pitch from 1 to 15, 1 to 25, etc. Always without undue muscular effort of any kind.

Mr. Walter Bogert, president of the National Association of Teachers of Singing, 1915-1917, has admirably summed up as follows the

Tests of Correct Breathing

Perfect control of the breath means:

(a) Ability to fill the lungs to their capacity, either quickly or slowly;
(b) Ability to breathe out as quickly or as slowly as occasion demands;
(c) Ability to suspend inspiration, with the throat open, whether the lungs are full or not, and to resume the process at will without having lost any of the already inspired breath;
(d) Ability to exhale under the same restrictions;
(e) Ability to sing and to sustain the voice on an ordinary breath;
(f) Ability to breathe quietly as often as text and phrase permit;
(g) Ability to breathe so that the fullest inspiration brings no fatigue;
(h) Ability so to economize the breath that the reserve is never exhausted;
(i) Ability to breathe so naturally, so unobtrusively, that neither breath nor lack of breath is ever suggested to the listener.

Tongue-Tip

Exercise 1. *Tongue-tip and Upper Gums*

Raise the tip of the tongue and touch the inner surface of the gums of the upper front teeth in the position for English **d**, **t**, **n**, **l**, **r**. Drop the tip to its normal position. Repeat three times. Neither the main part of the tongue, the lower jaw, nor the lips should take active part in the movement.

Repeat the following: **d**, **d**, **d ' t**, **t**, **t ' n**, **n**, **n ' l**, **l**, **l ' r**, **r**, **r ' dt**, **dn**, **dl**, **dr ' td**, **nd**, **ld**, **rd ' dtlnr ' rlndt**.

A comma (,) indicates a pause in which the organs of speech return to their neutral pose; a breath-mark (') indicates a pause for taking breath.

Exercise 2. *Practice in Trilling the Tip of the Tongue*

Place the tongue loosely in about the position for **d**, and then force the breath through the open mouth:

t, d, t, d, t, d ' tdtdtdtdtdtd ' trrrr.
f, d, f, d, f, d ' fdfdfdfdfdfd ' frrrr.

Exercise 3. *Tongue-tip and Teeth*

Raise the tip of the tongue, and touch the inner surface of the upper teeth in the position for **ð** in *then* and **θ** in *thin.*

Exercise 4.

ð, θ, ð, θ, ð, θ ' d, ð, t, ð, n, ð, l, ð.
ð, r, ð ' d, θ, t, θ, n, θ, l, θ, r, θ.

Exercise 5. *Tongue-tip with Front and Mixed Vowels*

Present the tongue for the mid-front position, (see **e**). Widen and narrow it at the sides. The lips take no active part in this exercise.

Exercise 6.

e, ɛ, ə, æ '
d, e, d, ɛ, d, ə, d, æ ' t, e, t, ɛ, t, ə, t, æ '
te, tɛ, tə, tæ ' de, dɛ, də, dæ, ne, nɛ, nə, næ,
dle, dlɛ, dlə, dlæ '
nle, nlɛ, nlə, nlæ,

Exercise 7. *Blade of Tongue raised toward the Gums*

For **z s**, present the blade or portion of the upper surface of the tongue just back of the tip of the tongue to the gums without contact at the center.

The tip rests against the inner surface of the lower front teeth (but see **z s**).

z, s, z, s, z, s ' ze, zɛ, zə, zæ ' se, sɛ, sə, sæ '
dz, tz, nz, lz, rz, ðz, θz '
ds, ts, ns, ls, rs, ðs, θs '
zle, zlɛ, zlə, zlæ '
sle, slɛ, slə, slæ '

Exercise 8. *Blade of Tongue retracted toward the Hard Palate*

For **ʒ**, as in *measure,* **ʃ**, as in *she,* adjust the tongue somewhat as for **z s**, but draw it back slightly.

ʒ, ʒ, ʒ ' ʃ, ʃ, ʃ ' dʒ, tʒ, nʒ, lʒ, rʒ, ðʒ, θʒ '
dʃ, tʃ, nʃ, lʃ, rʃ, ðʃ, θʃ '
dʒe, tʒɛ, nʒə, lʒæ ' rʒe, ðʒɛ, θʒə, zʒæ '
dʃe, tʃɛ, nʃə, lʃæ ' rʃe, ðʃɛ, θʃə, zʃæ '

Exercise 9. *Middle-of-the-Tongue, and Top-of-Palate Consonants*

For **j** as in English *yes,* German *ja,* French *fille,* **ç** in German *ich,* **ɲ** in French *mignon,* Italian *Signor,* **ʎ** in Italian *egli,* raise the middle of the tongue towards the top or dome of the hard palate, keeping the tip of the tongue against the back of the lower front teeth. For the **j ç,** the constriction is open at the center, with contact at the sides; for **ʎ** there is contact at the center, but the sides are open; for the **ɲ** the oral contact or stoppage is complete, but the veil or soft palate is down, and the passage from the pharynx into the nose is open.

Exercise 10.

j, ç, ɲ, ʎ'
d, j, t, j, n, j, l, j, r, j, ð, j, θ, j, z, j, s, j'
d, ç, t, ç, n, ç, l, ç, r, ç, ð, ç, θ, ç, z, ç, s, ç'
d, ɲ, t, ɲ, n, ɲ, l, ɲ, r, ɲ, ð, ɲ, θ, ɲ, z, ɲ, s, ɲ'
d, ʎ, t, ʎ, n, ʎ, l, ʎ, r, ʎ, ð, ʎ, θ, ʎ, z, ʎ, s, ʎ'

Exercise 11. *Front Vowels*

For **i, ɪ, e, ɛ, æ,** raise the middle of the tongue towards the top of the hard palate, allowing the tip of the tongue to rest gently against the back of the lower front teeth. The constriction is open at the center in all cases, for **i** very slightly more than for **j,** and then the opening becomes still greater and greater for the other vowels, until **æ,** the most open of this group, is reached.

Exercise 12. *Front Vowels with Consonants*

i, i, i, ɪ, ɪ, ɪ' i, ɪ, e, ɛ, æ'
di, dɪ, de, dɛ, dæ' did, dɪd, ded, dɛd, dæd' ti, tɪ, te, tɛ, tæ', etc.
ni, etc.
li, etc.
ri, etc.
ði, etc.
θi, etc.
zi, etc.
si, etc.
ji, etc.

Lip Rounding for Front Vowels

For French and German **y Y ø œ.**

Exercise 13.

For **y:** tongue as for **i,** lips rounded.
For **Y:** tongue as for **ɪ,** lips rounded.
For **ø:** tongue as for **e,** lips rounded.
For **œ:** tongue as for **ɛ,** lips rounded.

Exercise 14.

dy, **dʏ**, **dø**, **dœ'** **ty**, **tʏ**, **tø**, **tœ'**
ny, **nʏ**, **nø**, **nœ'** **ly**, **lʏ**, **lø**, **lœ'**
ry, **rʏ**, **rø**, **rœ'** Repeat with **ð**, **θ**, **z**, **s**, **ʒ**, **ʃ**, **j**, **ɲ**, **ʎ**.

Exercise 15.

di, **dy**, **dɪ**, **dʏ**, **de**, **dø**, **dɛ**, **dœ'**
ti, **ty**, **tɪ**, **tʏ**, **te**, **tø**, **tɛ**, **tœ'**
ni, **ny**, **nɪ**, **nʏ**, **ne**, **nø**, **nɛ**, **nœ'**
li, **ly**, **lɪ**, **lʏ**, **le**, **lø**, **lɛ**, **lœ'**
ri, **ry**, **rɪ**, **rʏ**, **re**, **rø**, **rɛ**, **rœ'** Repeat, with other consonants.

Exercise 16. *Bilabial Consonants*

For **b**, **p**, **m**, **w**, **ʰr**, place the upper and lower lips together, in complete contact for **b**, **p**, **m**, but with a small central opening of the lips and an u-like raising of the back of the tongue, for **w**, **ʰr**.

Exercise 17.

b b b, **p**, **p**, **p**, **m**, **m**, **m**, **w**, **w**, **w'**
bp, **bp**, **bp'** **bpm**, **bpm**, **bpm**, **bpmw'**
bi, **bɪ**, **be**, **bɛ**, **bə**, **bæ'**, **ib**, **ɪb**, **eb**, **ɛb**, **əb**, **æb'**
bib, **bɪb**, **beb**, **bɛb**, **bəb**, **bæb'** Repeat, with **p**, **m**, **w**.
bib, **byb**, **bɪb**, **bʏb**, **beb**, **bøb**, **bɛb**, **bœb'** Repeat, with **p**, **m**, **w**.

Exercise 18.

mli, **ilm**, **milm**, **mlilm'**
mly, **ylm**, **mylm**, **mlylm'**
mle, **elm**, **melm**, **mlelm'**
mlø, **ølm**, **mølm**, **mløIm'**
mlɛ, **ɛlm**, **mɛlm**, **mlɛlm'**
mlœ, **œlm**, **mœlm**, **mlœlm'**
mlə, **əlm**, **məlm**, **mləlm'**
mlæ, **ælm**, **mælm**, **mlælm'**

Exercise 19.

bli, **ilb**, **bilb**, **blilb'** *etc.*
dli, **ild**, **dild**, **dlild'** *etc.*
Repeat, with other consonants.

Labiodental Consonants

For **v f**, raise the lower lip to the upper front teeth, leaving a slight slit-like opening.

Exercise 20.

vi, vy, ve, vø, vɛ, vœ'
fi, fy, fe, fø, fɛ, fœ'

Exercise 21.

viv, vyv, vev, vøv, vɛv, vœv'
fif, fyf, fef, føf, fɛf, fœf'

Low Vowels

For English **a** as in *ask,* **ɑ** in *father,* **ɒ** in *not,* lower the tongue at the center and toward the back.

Exercise 22.

a, ɑ, ɒ'
da, ad, ta, at, na, an, la, al, ra, ar' Repeat, with other consonants.
dɑ, ɑd, *etc.*
dɒ, ɒd, *etc.*
dad, dɑd, dɒd' tat, tɑt, tɒt' Repeat, with other consonants.

Exercise 23.

di, a, dɪ, a, de, a, dɛ, a, də, a, dæ, a'
ti, a, tɪ, a, te, a, tɛ, a, tə, a, tæ, a'
li, ɒ, *etc.*
ri, ɑ, *etc.*

Exercise 24.

dlɑ, dlɑ, dlɒ'
tlɑ, tlɑ, tlɒ'
nlɑ, nlɑ, nlɒ'
rlɑ, rlɑ, rlɒ'
Repeat, with other consonants.

Exercise 25. *Soft Palate, or Veil*

(a) Open the mouth comfortably wide. Raise the veil or soft palate from its neutral position to the rear wall of the pharynx, by inhaling through the mouth and exhaling through the nose. Repeat three times. Observe the action of the soft palate in a mirror. The release of the velo-pharyngeal stoppage may be either gradual and gentle, and therefore inaudible, as is preferably the case in this exercise, or sudden and explosive, and therefore audible, as sometimes in actual speech, as in the oral breath-stoppage of a **t** backwards into the nose into an **n**, as in *Whitney,* instead of frontwards into a purely oral vowel or other unnasalized sound, or into a pause, as in *white.*

Exercise 25. *Back of Tongue, and Soft Palate*

For **g k ŋ x**, as in English *go, kick, sing,* and German *ach,* Spanish *majo,* raise the posterior or back part of the tongue towards the veil or soft palate. In articulating the **g**, the **k**, and **ŋ**, the oral stoppage is complete. In the **ŋ**, the veil is down, however, and the passage from the pharynx into the nose is therefore open. In the **x**, the constriction of the oral passage stops short of an actual stoppage, and the sound is a fricative not a stop. The **ŋ** though a nasalized oral stop, is open into, and usually through, the nose, and therefore indefinitely continuable. In all these articulations, the tip of the tongue rests on, or slightly back of the lower front teeth. Now drop the tongue to its neutral position. Repeat three times. The main part of the tongue, and the jaw, are neutral, and take no part in this exercise.

Exercise 26.

(a) **g, g, g, k, k, k, ŋ, ŋ, ŋ' g, k, g, ŋ, k, g, k, ŋ, g, k, ŋ'**

(b) **gig, gyg, gɪg, gʏg, geg, gøg, gɛ̈g, gœg, gæg, gɑg'**
kik, kyk, kɪk, kʏk, kek, køk, kɛk, kœk, kæk, kɑk'
dig, tɪk, nyg, lek, rɛk, tøk, nɛg, tæk, lœg'

(c) **ŋ, g, ŋ, k, ŋ, g, k' ŋ, g, i, ŋ, g, ɪ, ŋ, g, e, ŋ, g, ɛ, ŋ, g, a, ŋ, g, ɑ'**
ŋ, g, k, i, ŋ, g, k, ɪ, ŋ, g, k, e, ŋ, g, k, æ, ŋ, g, k, ɑ, ŋ, g, k, c'

(d) **ŋ, i, ɪ, e, ɛ, æ' ŋ, i, ɪ, e, ɛ, a, ɑ' ŋ, i, ɪ, e, ɛ, a, ɑ, c'**

Exercise 27. *Back of Tongue and Soft Palate, Back Vowels*

For English **u** *whoever,* **ʊ** *bull,* **o** *poetic,* **ɔ** *door,* **ʌ** *but,* **c** *law,* raise the back of the tongue towards the veil or soft palate, quite high and close for **u**, but less and less high for the other vowels until **c**, the most open of all the vowels of this group, is reached. During the articulation of each one of these vowels, except the **ʌ** of English *but,* the lips should be rounded, quite prominently in the case of **u**, but somewhat less so in the other four vowels. During the pronunciation of these back vowels the point of the tongue rests lightly against or slightly behind the lower front teeth. Now drop the tongue to the neutral position.

Exercise 28.

(a) **u, ʊ, o, ɔ, ʌ, c'**

(b) **du, dʊ, do, dɔ, dʌ, dc'**
tu, tʊ, to, tɔ, tʌ, tc'
Repeat, with other consonants.

Exercise 29.

glug, glʊg, glog, glɔg, glʌg, glcg'
kluk, klʊk, klok, klɔk, klʌk, klck'
gluŋ, glʊŋ, gloŋ, glɔŋ, glʌŋ, glcŋ'
kluŋ, klʊŋ, kloŋ, klɔŋ, klʌŋ, klcŋ'
duig, tʊɪg, noeg, lɔɛg, roæg'
duik, tʊɪg, noek, lɔɛk, roæk'
duiŋ, tʊɪŋ, nɔen, lɔɛn, roæŋ' *etc.*
Repeat, with other consonants.

Exercise 29. *Vowels with Nasal Resonance*

For the French nasalized vowels, **ɑ̃** as in *dans,* **ɛ̃** as in *vin,* **ɔ̃** as in *bon,* **œ̃** as in *humble,* lower the soft palate somewhat, from the position of contact with the rear wall of the pharynx (normal in the production of the purely oral vowels), so as to open the passage from the pharynx into the two nose-passages, and thus permit the resonance of these cavities to impart to the vowel the characteristic quality called nasal. Observe the action of the soft palate in a mirror and see that this organ is not lowered too much, and the vowel thus given excessive nasality.

Exercise 30.

(a) **ɑ̃, ɛ̃, ɔ̃, œ̃' dɑ̃, dɛ̃, dɔ̃, dœ̃' tɑ̃, tɛ̃, tɔ̃, tœ̃'**
lɑ̃, lɛ̃, lɔ̃, lœ̃' rɑ̃, rɛ̃, rɔ̃, rœ̃'
Repeat, with other consonants.

(b) **dlɑ̃, dlɛ̃, dlɔ̃, dlœ̃'**
glɑ̃, glɛ̃, glɔ̃, glœ̃'
klɑ̃, klɛ̃, klɔ̃, klœ̃'
Repeat, with other consonants.

The singer must especially observe that the pause-mark between the successive letters serves to indicate the complete return of the organs of speech (or, absence of legato), to their neutral position. Be especially careful, in singing, to preserve the purity of the nasal vowels, and avoid the intrusion of nasal consonants such as **m n ŋ**.

Exercise 31. **r**-*Drill,* to strengthen the tip of the tongue.

fd, fd, fd, frrr' dt, dt, dt, drrr, td, td, td, trrr'
drrr, trrr, nrrr, lrrr, mrrr, prrr, grrr, zrrr, srrr, *etc.*

Exercise 32. **r** *preceded by vowels*

dar, der, dir, dor, dur, dyr, dør, dœr'
dœr, dør, dyr, dur, dor, dir, der, dar'
tar, ter, tir, tor, tur, tyr, tør, tœr'
tœr, tør, tyr, tur, tor, tir, ter, tar'
Repeat, with **l, n, ð, θ, z, s, ʒ, ʃ, j, g, k, m, b, p, v, f.**

Exercise 33. **r** *followed by vowels*

bra, bre, bri, bro, bru, bry, brø, brœ'
brœ, brø, bry, bru, bro, bri, bre, bra'
fra, fre, *etc.*
gra, *etc.*
ʒra, *etc.*
ʃra, *etc.*
kra, *etc.*
mra, *etc.*
nra, *etc.*
pra, *etc.*
sra, *etc.*
vra, *etc.*
tra, *etc.*
zra, *etc.*

Exercise 34. **r**-*Drill,* all the **r**'s to be distinctly trilled with the tongue-tip

(a)	(b)
bar, ba, bra	**kar, ka, kra,**
ber, be, bre,	**ker, ke, kre,**
bir, bi, bri,	**kir, ki, kri,**
bor, bo, bro,	**kor, ko, kro,**
bur, bu, bru,	**kur, ku, kru,**
byr, by, bry,	**kyr, ky, kry,**
bør, bø, brø,	**kør, kø, krø,**
bœr, bœ, brœ,	**kœr, kœ, krœ,**

Exercise 35. Repeat, with the following vowels.

dar, da, dra, *etc.*
far, fa, fra, *etc.*
gar, ga, gra, *etc.*
ʒar, ʒa, ʒra, *etc.*
jar, ja, jra, *etc.*
lar, la, lra, *etc.*
mar, ma, mra, *etc.*
nar, na, nra, *etc.*
par, pa, pra, *etc.*
sar, sa, sra, *etc.*
ðar, ða, ðra, *etc.*
θar, θa, θra, *etc.*
tar, ta, tra, *etc.*
var, va, vra, *etc.*
zar, za, zra, *etc.*
ksar, ksa, ksra, *etc.*

Exercise 36.

bra, arb'
bre, erb'
bri, irb'
bro, orb'
bru, urb'
bry, yrb'
brø, ørb'
bræ, ærb'
Repeat, with other consonants.

Exercise 37.

brarb, frarf'
brerb, frerf'
brirb, frirf'
brorb, frorf'
brurb, frurf'
bryrb, fryrf'
brørb, frørf'
brærb' frærf'
Repeat, with other consonants.

Exercise 38.

ʒa, bra, ʒa, dra'
ʒe, bre, ʒe, dre'
ʒi, bri, ʒi, dri'
ʒo, bro, ʒo, dro'
ʒu, bru, ʒu, dru'
ʒy, bry, ʒy, dry'
ʒø, brø, ʒø, drø'
ʒæ, bræ, ʒæ, dræ'
Repeat, with other consonants.

Exercise 39.

ʃa, bra, ʃa, dra', etc.
ʃe, bre'
ʃi, bri'
ʃo, bro'
ʃu, bru'
ʃy, bry'
ʃø, brø'
ʃæ, bræ'
Repeat, with other consonants.

Exercise 40.

ʒɑ, brɑ, sɑ, **ʒɑ, krɑ, sɑ**, etc.
ʒe, bre, se
ʒi, bri, si
ʒo, bro, so
ʒu, bru, su
ʒy, bry, sy
ʒø, brø, sø
ʒœ, brœ, sœ '
Repeat, with other consonants.

Exercise 41.

ʒɑ, brɑ, zɑ, ʒɑ, drɑ, sɑ, etc.
ʒe, bre, ze
ʒi, bri, zi
ʒo, bro, zo
ʒu, bru, zu
ʒy, bry, zy
ʒø, brø, zø
ʒœ, brœ, zœ '
Repeat, with other consonants.

Exercise 42.

ʃɑ, brɑ, sɑ, ʃɑ, drɑ, sɑ, etc.
ʃe, bre, se
ʃi, bri, si
ʃo, bro, so
ʃu, bru, su
ʃy, bry, sy
ʃø, brø, sø
ʃœ, brœ, sœ '
Repeat, with other consonants.

Exercise 43.

ʒɑ, brɑ, sɑ, ʒɑ, zɑ, **ʒɑ, drɑ, sɑ, ʒɑ, zɑ,**
ʒe, bre, se, ʒe, ze, **ʒe, dre, se, ʒe, ze,**
ʒi, bri, si, ʒi, zi, **ʒi, dri, si, ʒi, zi,**
ʒo, bro, so, ʒo, zo, **ʒo, dro, so, ʒo, zo,**
ʒu, bru, su, ʒu, zu, **ʒu, dru, su, ʒu, zu,**
ʒy, bry, sy, ʒy, zy, **ʒy, dry, sy, ʒy, zy,**
ʒø, brø, sø, ʒø, zø, **ʒø, drø, sø, ʒø, zø,**
ʒœ, brœ, sœ, ʒœ, zœ,' **ʒœ, drœ, sœ, ʒœ, zœ,**'
Repeat, with other consonants.

Exercise 44.

ʒɑ, brɑ, zɑ, ʃɑ, brɑ, sɑ,
ʒe, bre, ze, ʃe, bre, se,
ʒi, bri, zi, ʃi, bri, si,
ʒo, bro, zo, ʃo, bro, so,
ʒu, bru, zu, ʃu, bru, su,
ʒy, bry, zy, ʃy, bry, sy,
ʒø, brø, zø, ʃø, brø, sø,
ʒœ, brœ, zœ, ʃœ, brœ, sœ,'
ʒɑ, lrɑ, zɑ, ʃɑ, grɑ, sɑ,
ʒe, lre, ze, ʃe, gre, se,
ʒi, lri, zi, ʃi, gri, ʂi,
ʒo, lro, zo, ʃo, gro, so,
ʒu, lru, zu, ʃu, gru, su,
ʒy, lry, zy, ʃy, gry, sy,
ʒø, lrø, zø, ʃø, grø, sø,
ʒœ, lrœ, zœ, ʃœ, grœ, sœ,'

Repeat, with other consonants.

Exercise 45.

bu, ɑ, by, ɑ,	(b)	**du, ɑ, dy, ɑ,**
bu, e, by, e,		**du, e, dy, e,**
bu, i, by, i,		**du, i, dy, i,**
bu, o, by, o,		**du, o, dy, o,**
bu, u, by, u,		**du, u, dy, u,**
bu, y, by, y,		**du, y, dy, y,**
bu, ø, by, ø,		**du, ø, dy, ø,**
bu, œ, by, œ,		**du, œ, dy, œ,'**

Repeat, with other consonants.

Exercise 46.

bru, ɑ, by, ɑ,	**dru, ɑ, dry, ɑ,**
bru, e, by, e,	**dru, e, dry, e,**
bru, i, by, i,	**dru, i, dry, i,**
bru, o, by, o,	**dru, o, dry, o,**
bru, u, by, u,	**dru, u, dry, u,**
bru, y, by, y,	**dru, y, dry, y,**
bru, ø, by, ø,	**dru, ø, dry, ø,**
bru, œ, by, œ,'	**dru, œ, dry, œ,'**

Repeat, with other consonants.

Exercise 47. *Consonant-Sequences.*

(1) *Two Consonants*

mf *lymph;* **mp** *bump;* **zd** *buzzed;* **lθ** *wealth;* **zm** *chasm;* **dʒ** *rage;* **tʃ** *church;* **bl** *black;* **gr** *grass;* **ðd** *breathed;* **ŋd** *hanged;* **θr** *throw;* **lz** *bells;* **lp** *pulp.*

(2) *Three Consonants*

ŋgw *languid;* **dʒd** *bridged;* **tʃt** *patched;* **lmz** *elms;* **ŋks** *thanks;* **nzd** *bronzed;* **sts** *hosts;* **ksp** *expel;* **ndʒ** *range;* **ndz** *bands;* **lkt** *mulct;* **ntʃ** *bunch.*

(3) *Four Consonants*

ntʃt *flinched;* **lfθs** *twelfths;* **ltʃt** *squelched;* **ndʒd** *changed.*

(4) *Five Consonants*

gldst *haggled'st;* **dʒdst** *judged'st;* **lptst** *scalped'st;* **lvdst** *solved'st.*

(5) *Six Consonants*

ltʃtst *filched'st;* **ndʒdst** *changed'st;* **ldʒtst** *bulged'st;* **ntʃtst** *crunched'st.*

PRACTICE in SOUND SEQUENCES

CLASS 1. TRANSITION FROM VOWEL TO VOWEL

Exercise 48.

Avoid interpolating a consonant sound. Put a new breath impulse on 2nd vowel

I am,	three hours,	my own,
he is,	low ambition,	my heirs,
blue eyes,	the hour,	the air,
we are,	the earth,	how old,
due east,	thy honor,	thy aim,
gray owl,	lonely isle,	holy angels.

CLASS 2. TRANSITION FROM VOWEL TO CONSONANT

Exercise 49.

Avoid anticipating consonant sounds.

we know,	the one,	the years,
thy praise,	unto day,	blue uniform,
Holy Ghost,	my soul,	the heavens,
stormy sea,	follow him,	hay stack,
brotherly kindness,	no doubt,	guilty heart,
throw stones,	know thyself,	Holy One.

CLASS 3. TRANSITION FROM CONSONANT TO VOWEL

Exercise 50.

their aim,	for aye,	burn up,
years ago,	in Arcady,	lead on,
hold it,	all events,	October ale,
Salvation Army,	all over,	in office,
dispute it,	divine attribute,	over all.

CLASS 4. TRANSITION FROM CONSONANT TO CONSONANT

(*a*) Transition from one consonant to another consonant which is *identical* with it in quality.

Exercise 51.

richest treasure,	and death,	all light,
that truth,	Blessed Jesus,	luxurious soil,
collegiate church,	studied deceit,	much sham,
established church,	languid dame,	bench show,
with thee,	his zeal,	black crape,
with them,	wax strong,	black cow,
dig gold,	solemn march,	ripe pear,
cub bear,	sharp plant,	tub butter.

(*b*) Transition from one consonant to another consonant affected by *voicing* or *unvoicing*.

Exercise 52.

cast down,	good time,	his soul,
at dinner,	spend time,	his skin,
chaste gem,	third trial,	nerve force,
beige shawl,	courage showing,	chief vice,
village shrew,	live fish,	black gown,
soap bubble,	five fishes,	big colt,
lamp black,		dig coal.
strap button,		

(*c*) Transition from a consonant produced by one mode of organic *action* to a consonant produced by another mode of organic action.

Exercise 53.

all night,	endeavor,	trust not,
old linen,	on Sunday,	spirit sigh,
all divine,	eternal joy,	reign supreme,
wild nature,	repent now,	horse show,
wilderness,	repentance,	but that,
midnight,	all through,	some one,
wild noise,	idol throne,	somebody,
pump,	Henry,	anthem,
chivalry,	stand ready,	good reading,
finger,	strong kite,	long coat.

(*d*) Transition from a consonant produced in one region or *place* of articulation to a consonant produced in another place of articulation.

Exercise 54.

Different parts of the same organ.

repent ye,	without control,	red cross,
great commander,	best Christian,	brilliant uniform,
white cross,	oak leaf,	shining letter,
his kin,	signal,	make strides,
like rain,	forget,	new,
enthusiastic,	celluloid,	beauty,
that yacht,	this union,	Irish yews,
leafless yews,	his goal,	book knowledge.
church yard,	bright yellow,	

(*e*) Transition from a consonant produced by the action of one part to a consonant produced by the action of another mobile part.

Exercise 55.

post haste,	advance payment,	this one,
that way,	his face,	brush factory,
old home,	at hand,	glorious pageant,
religious work,	bring forth,	five hundred,
blank verse,	deep grief,	bank holiday,
small function,	strong bank,	white hand.

CHAPTER XIV.

Chants

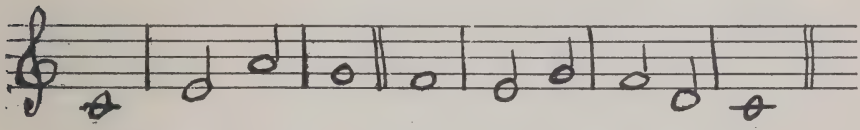
The chanting is meant to serve as an intermediary between the spoken and the sung word.

I. Enunciate the sounds separately and slowly.

II. Speak the words slowly and detach them one from the other.

III. Speak the words in the rhythm of the spoken word.

IV. Add the resonance of the singing tone and sing the words on the pitch indicated by the notes of the chant.



Romeo and Juliet. Act III, Scene IV. Shakespeare.
First four lines in English, Italian, French, German.

English:

Wilt thou be gone? it is not yet near day;
wɪlt ðaʊ biˈgən ɪt ɪz nət | ˈjɛt nɪːɹ |ˈdeᵀɪ ||
it was the nightingale, and not the lark
ɪt wəz ðə ˈnaɪtɪnˈgeᵀl, ænd nət ðə ˈlɑːɹk,
that pierced the fearful hollow of thine ear.
ðæt pɪːɹst ðə ˈfɪːɹfʊl | ˈhəlo | əv ðaɪn | ˈɪːɹ ||.
nightly she sings on yon pomegranate tree;
ˈnaɪtlɪ ʃiː sɪŋz ən jən pəm- | ˈgrænɪt- | ˈtriː ||.
believe me, love, it was the nightingale.
bɪliːv mi, ˈlʌv, ɪt | ˈwəz ðə | ˈnaɪtɪn- | ˈgeᵀɪl ||.

Italian:

Vuoi tu dunque lasciarmi? Ancor lontana,
vŭɔːi tu | ˈdunkŭeᵀ la- | ˈʃarmi? || anˈkor lonˈtana,
* *
credi, l'alba esser dee, fu lusignuolo
ˈkredi, ˈlalba ɛsːer ˈdeeᵀ | fu- | ˈluzi- | ˈɲŭɔloᵀ ||.

Footnote—The bars |, ||, indicate the change of the musical measure.
(* or ŋ)

French:

Veux tu donc déja me quitter?
vø ty dõ | ˈdeʒa mə | kite? ||
Le jour n'est pas encor prêt à paraître.
lə ʒuːr nɛ pa- zãˈkɔr | ˈprɛ- | ta pa- | ˈrɛːtrə ||.
C'est le rossignol et non l'alouette;
sɛ lə ˈrɔsiˈɲɔl, e nõ | la-|lˈwɛtə||.
Dont la voix a pénétré ton oreille inquiète
dõ la vwa-za pene-|ˈtre tõ-nɔ-|ˈrɛːjɛ̃- | ˈkjɛtə.
Toute la nuit il chante la bas sur ce grenadier
ˈtuːtə la nyi-til ʃãːt la ˈba syr sə | ˈgrəna-|ˈdje||.
Crois moi, cher amour, cétait le rossignol
krwa mwa, ʃɛ- raˈmuːr, | ˈsetɛ lə | ˈrɔsi- | ˈɲɔl ||.

German:

Willst du schon gehn? der Tag ist ja noch fern;
vɪlst- du ʃoːn geːn? dɛr ˈtak* ist ja nɔx fɛrn ||.
Es war die Nachtigall, und nicht die Lerche,
ɛs var di ˈnaːxtiˈgal, ʊnt nɪçt—di ˈlɛrçə.
die eben jetzt dein banges Ohr durch-drang
di ˈeːbən jɛtst-dain | ˈbaŋəs | oːr dʊrç- | ˈdraŋ.
Sie singt des Nachts auf dem Granat-baum dort;
zi ziŋt dɛs naːxts aʊf dem gra|ˈnat-baʊm | ˈdɔrt.
Glaub', Lieber mir; es war die Nachtigall
glaʊb, ˈliːbər miːr, ɛs | vaːr di | ˈnaxtiː-|ˈgall||.

* or x.

CHAPTER XV.

Transcriptions

English:

How sweet the moonlight |—| Music, when soft voices die |—|
I sent my soul |—| A book of verses |—| Hark, Hark! The Lark!

Italian:

Voce di Donna |—| Sebben Crudele |—| Amarilli.

French:

Psyché |—| Dansons la Gigue,

German:

Aus meinen grossen Schmerzen |—| Der Fichtenbaum.

English

How Sweet the Moonlight

Shakespeare (*Merchant of Venice*) Calcott

How sweet the moonlight sleeps upon this bank,
haʊ swiːt ðə ˈmuːnlaɪt sliːps əˈpən ðɪs bæŋk
here we will sit and let the music
hɪɹ wiː wɪl sɪt ænd lɛt ðə ˈmjuːzɪk
creep in our ears;
kriːp ɪn ɑʊɹ ɪːɹz
Soft stillness and the night
sɔft ˈstɪlnɪs ænd ðə naɪt
become the touches of sweet harmony
bɪˈkʌm ðə ˈtʌtʃɪz ɔv swiːt ˈhɑːɹmənɪ

Music, when soft voices die

Shelley Noel Johnson

Music, when soft voices die,
ˈmjuːzɪk, ɦɛn sɔːft ˈvɔɪsɪz daɪ
vibrates in the memory
ˈvaɪbreᵀɪts ɪn ðə ˈmɛmərɪ
Odours, when sweet violets sicken
ˈoːdəːɹz, ɦɛn swiːt ˈvaɪolɛts-ˈsɪkən
Live within the sense they quicken
lɪv wɪˈðɪn ðə sɛns ðeᵀɪ ˈkwɪkən
Rose-leaves, when the rose is dead,
roːz-ˈliːvz, ɦɛn ðə roːz ɪz ˈdɛd
are heap'd for the beloved's bed;
ɑːɹ hiːpt fɔɹ ðə bɪˈlʌvɪdz ˈbɛd
And so thy thoughts, when thou art gone,
ænd soː ðaɪ ˈθɔːts, ɦɛn ðaʊ ɑːɹt ˈgɔn
Love itself shall slumber on
lʌv ɪtˈsɛlf ʃæl ˈslʌmbər ɔn

Rubaiyát of Omar Khayyám

Music by Liza Lehman

Each morn a thousand Roses brings, you say;
i:tʃ mɔ:ɹn ə ˈθaʊzənd ro:zɪz brɪŋz, ju ˈseᵀɪ
Yes, but where leaves the Rose of Yesterday?
ˈjɛs bʌt ɦɛ:ɹ li:vz ðə ro:z ɐv ˈjɛstəɹdeᵀɪ
And this first summer month that brings the Rose
ænd ðɪs fɐɹst ˈsʌməɹ ˈmʌnθ-ðæt brɪŋz ðə ˈro:z
Shall take Jamshyd and Kaïkobád away
ʃæl teɪk jæmʃid ænd ˈkaɪkobad əwˈeᵀɪ

Rubaiyát of Omar Khayyám

Music by Liza Lehman

I sent my Soul through the Invisible
aɪ sɛnt maɪ so:l θru: ði ɪnˈvɪzɪbəl
Some secret of that after-life to spell
sʌm ˈsi:krɪt ɐv ðæt ˈa:ftəɹ laɪf tu spɛl
And bye-and-bye my Soul returned to me
ænd baɪ ænd ˈbaɪ maɪ so:l rɪˈtɐɹnd-tu ˈmi:
And answer'd: I myself am Heav'n and Hell—
ɑnd ˈɑnsərd, aɪ maɪˈsɛlf æm ˈhɛvn ænd ˈhɛl

A book of verses underneath the Bough,
ə bʊk ɐv-ˈvɐɹsɪz ʌndəɹˈni:θ-ðə baʊ
A jug of Wine, a loaf of Bread and Thou
ə dʒʌg ɐv waɪn, ə lo:f ɐv brɛd ænd ðaʊ
Beside me singing in the wilderness
bɪsaɪd mi ˈsɪŋɪŋ ɪn ðə ˈwɪldəɹnɪs
Oh, wilderness were Paradise enow
o, ˈwɪldəɹnɪs wɐ:ɹ ˈpaɹədaɪs i:ˈnaʊ

Hark, Hark! the Lark!

Shakespeare — Schubert

Hark, hark! the lark at Heav'n's gate sings,
hɑːɹk, ˈhɑːɹk, ðə lɑːɹk æt ˈhɛvnz geᵀɪt ˈsɪŋz

And Phoebus 'gins to rise,
ænd ˈfiːbəs gɪnz tu ˈraɪz

His steeds to water at those springs
hɪz-stiːdz tu ˈwɔːtər æt ðoːz-sprɪŋz

On chalic'd flow'rs that lies!
ən ˈtʃælɪst ˈflaʊɹz ðæt laɪz

And winking Mary-buds begin
ænd ˈwɪŋkɪŋ mɛrɪ bʌdz bɪgɪn

to ope their golden eyes,
tu oːp ðɛːɹ ˈgoːldən aɪz

With every thing that pretty bin
wɪð ˈɛvrɪ-θɪŋ ðat ˈprɪtɪ bɪn

My Lady sweet, arise
maɪ ˈleᵀɪdɪ swiːt əˈraɪz

ITALIAN

Aria, Voce di Donna

(*La Gioconda*) A. Ponchielli

Voce di donna o d'angelo
ˈvoːtʃeᵀ di ˈdɔnːa o ˈdandʒeloᵀ
Le mie catene ha sciolto,
le ˈmieᵀ kaˈteneᵀ a ˈʃɔltoᵀ
mi vietan le mie tenebre
mi ˈvĭɛtan le ˈmieᵀ ˈtɛnebreᵀ
Di quella santa il volto
di ˈkŭelːa ˈsanta il ˈvɔltoᵀ
Pure da me non partasi
ˈpuːreᵀ da me non ˈpartasi
Senza un pietoso don, no!
ˈsɛntsa un pĭeˈtoːzoᵀ don, nɔ!
A te questo rosario
a te ˈkŭestoᵀ roˈzaːrioᵀ
che le preghiere aduna,
ke le preˈgĭɛreᵀ aˈduːna
io te lo porgo, accettalo,
ˈioᵀ te lo ˈpɔrgoᵀ aˈtːʃɛtːaloᵀ
Ti porterà fortuna,
ti pɔrteˈra fɔrˈtuːna
Sulla tua testa vigili
ˈsulːa ˈtua ˈtɛsta ˈviːdʒili
La mia benedizion.
la ˈmia beneˈditsĭon

(Footnote)—The pronunciations are those indicated in Dizionario Scolastico by P. Petrocchi.

Sebben, Crudele

Canzonetta Caldara

Sebben, crudele, mi fai languir,
seˈbːɛn, kruˈdɛːleᵀ, mi fai lanˈgŭiːr: (or **laŋˈgŭiːr:**)
Sempre fedele ti voglio amar
ˈsɛmpreᵀ feˈdeːleᵀ ti ˈvɔʎoᵀ aˈmaːr:
Con la lunghezza del mio servir
kon la lunˈgetːsa (or **luŋˈgetːsa**) **del ˈmioᵀ sɛrˈviːr:**
la tua fierezza sapro' stancar.
la ˈtua fĭɛˈretːsa saˈproᵀ stanˈkar: (or **staŋˈkar:**)

Aria, Porgi Amor

(*Le nozze di Figaro*)

Mozart

Porgi amor, qualche ristoro
ˈpɔrdʒi aˈmoːr: ˈkŭalkeᵀ riˈstɔːroᵀ

Al mio duolo á miei sospir
al ˈmioᵀ ˈdŭɔːloᵀ a mĭˈɛi soˈspiːr:

O mi rendi il mio tesoro
o mi ˈrɛndi ˈ il ˈmioᵀ teˈzɔroᵀ

O mi lascia almen morir
o mi ˈlaʃa alˈmen moˈriːr:

Amarilli, mia bella

(*Madrigal*)

Caccini

Amarilli, mia bella, non credi, o del mio cor,
amaˈrilːi mia ˈbɛlːa, non ˈkredi o del mioᵀ kɔːr:

Dolce desio, d'esser tu l'amor mio?
ˈdoːltʃeᵀ deˈziːoᵀ, ˈdɛsːer: tu laˈmoːr: ˈmiːoᵀ?

Credilo pur, e se timor t'assale
ˈkreːdiloᵀ puːr:, e se tiˈmoːr: tasːˈaːleᵀ

dubitar non ti vale,
ˈduːbitar: non ti ˈvaːleᵀ

Aprimi il petto e vedrai scritto in core:
ˈaːprimi-il ˈpɛtːoᵀ e veˈdrai ˈskritːoᵀ in ˈkɔːreᵀ

Amarilli è il mio amore.
amaˈrilːi ɛ-il ˈmioᵀ aˈmoːreᵀ

FRENCH

Psyché **psiʃe**

Corneille

Paladilhe

Je suis jaloux, Psyché, de toute la nature,
ʒə sɥi ʒaˈluː psiʃe, də ˈtutə la naˈtyːrə

Les rayons du soleil vous baisent trop souvent.
lɛ rɛˈjɔ̃ dy sɔˈ lɛːj vu ˈbɛzə trɔ suˈvɑ̃

Vos cheveux souffrent trop les caresses du vent
vo ʃəˈvø ˈsufrə trɔ lɛ kaˈrɛsə dy vɑ̃

Quand il les flatte, j'en murmure!
kɑ̃-til-lɛ ˈflatə, ʒɑ̃ myrˈmyːrə

L'air même que vous respirez avec trop de plaisir
lɛːr ˈmɛmə kə vu rɛspiˈre aˈvɛk trɔ də plɛˈziːr

Passe sur votre bouche.
pɑsə syr vɔtrə buʃə

Votre habit de trop près vous touche!
vɔ-trabi də trɔ prɛ vu tuʃə

Et sitôt que vous soupirez, je ne sais quoi qui méffarouche,
e siˈto kə vu supiːre, ʒə nə se kwa ki mefaˈruːʃə

Craint, parmi vos soupirs, des soupirs égarés!
ˈkrɛ̃, parˈmi voː suˈpiːr, dɛ suˈpiːr-zegaˈre

(Footnote)—Especial pains have been taken to indicate the liaisons, particularly as these are of more frequent occurrence in singing and dignified declamation, than in ordinary conversation.

Dansons la Gigue

(*Verlaine*)

Musique de Poldowski

1. J'aimais surtout ses jolis yeux
ʒeˈmɛ syrˈtu sɛ ˈʒɔli-zjø
Plus clairs que l'étoile des cieux,
ply klɛːr kə leˈtwalə dɛ-sjø
J'aimais ses yeux malicieux. Dansons la Gigue!
ʒeˈmɛ sɛ-zjø maliˈsjø; ˈdãsõ la ˈʒiːgə

2. Elle avait des façons vraiment
ɛ- lavɛ dɛ faˈsɔ vrɛˈmã
De désoler un pauvre amant
də dezɔˈle-rœ̃ poː——vraˈmã
Que c'en était vraiment charmant!
kə sã-neˈtɛ vrɛˈmã ʃarˈmã

3. Mais je trouve encore meilleur
mɛ ʒə truː— vãˈkɔːr mɛˈjœːr
Le baiser de sa bouche en fleur
lə ˈbeze də sa buː—ʃã ˈflœːr
Depuis qu'elle est morte à mon cœur
dəˈpɥi kɛ—lɛ mɔːr—ta mõ ˈkœːr.

4. Je me souviens, je me souviens,
ʒə mə suˈvjɛ̃, ʒə mə suˈvjɛ̃.
Des heures et des entretiens
dɛ-ˈzœːrə—ze dɛ—zãtrəˈtjɛ̃,
Et c'est le meilleur de mes bien. Dansons la Gigue!
e sɛ lə mɛˈjœːr də mɛ ˈbjɛ̃. ˈdãsõ la ˈʒiːgə.

GERMAN

Aus Meinen Grossen Schmerzen

(Heine)

Franz

1. Aus meinen grossen Schmerzen,
aʊs ˈmaɪnən ˈgroːsən ˈʃmɛrtsən
Mach ich die kleinen Lieder
max ɪç di ˈklaɪnən ˈliːdər,
Die heben ihr klingend Gefieder,
di ˈheːbən iːr ˈklɪŋənt gəˈfiːdər.
Und flattern nach ihrem Herzen.
ʊnt ˈflatərn nax ˈiːrəm ˈhɛrtsən.

2. Sie fanden den Weg zur Trauten,
zi ˈfandən den vek* tsur ˈtraʊtən,
Doch kommen sie wieder und klagen,
dɔx ˈkɔmən zi ˈviːdər ʊnt ˈklaːgən,
Und klagen, und wollen nicht sagen,
ʊnt ˈklaːgən, ʊnt ˈvɔlən nɪçt ˈzaːgən.
Was sie im Herzen schauten,
vas—zi ɪm ˈhɛrtsən ˈʃaʊtən.

*Or **ç**.

Der Fichtenbaum

1. Ein Fichtenbaum steht einsam im Norden auf kahler Höh,
aɪn ˈfɪçtənbaʊm ʃteːt ˈaɪnzam ɪm ˈnɔːrdən aʊf kaːlər høː
Ihm schläfert; mit weisser Decke umhüllen ihn Eis und Schnee,
iːm ˈʃlɛːfərt, mɪt ˈvaɪsər ˈdɛkə ʊmˈhʏlən iːn aɪs ʊnt ʃneː

2. Er träumt von einer Palme, die fern im Morgenlant,
ɛr ˈtrɔʏmt fɔn ˈaɪnər ˈpalmə, di fɛrn ɪm ˈmɔrgənlant,
Einsam und schweigent trauert auf brennender Felsenwand,
ˈaɪnzam ʊnt ˈʃvaɪgənt— ˈtraʊərt aʊf ˈbrɛnəndər ˈfɛlzənvant.

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INDEX

Introduction. 7

Preface—Purpose and Nature of the Work. 9
Linguistic Requirements of Public Singers.
Foreign Pronunciation.
Relation of Speech to Song.

Comparative Phonetics 10
Physiological Phonetics.

Training of the Speech-Organs 11
Chanting and Singing.
Chant-Form.

PART ONE—PRINCIPLES

Chapter I

Phonetics Applied to Diction. 13
Meaning of Lyric Diction.
Voice Training for Children.
Three Requirements 14
"Vox Americana" 16
Phonetic Symbolization 17
The International Phonetic Association. 19
The International Phonetic Alphabet: Consonants. 20
The International Phonetic Alphabet: Vowels. 21

Chapter II—Breathing

"Who Breathes Best Sings Best". 22
Faults in Breathing.
Breath—Efficiency. 23
Physiology of Respiration.
Breath and Voice 24

Chapter III—Organs of Speech

Practice in Whisper. 25
The Speech-Organs.
The Larynx.
The Tongue 26
The Soft Palate. 27
The Hard Palate. 28
The Lips.

INDEX

Chapter XI

Consonants. 91
Alveolar and Dental Stop Consonants 92
English **d** 92
Italian, French, German, Spanish **d** 93
English, Italian **t** 94
French, German, Spanish **t** 95
English **n** 95
Italian, French, German, Spanish **n** 96
English **l** 96
Italian, French, German, Spanish **l** 97
English **r** 98
Italian, French, German **r** 99
Spanish **r** 100
English, Spanish **ɹ** 101
English **ð** 102
Spanish **ð** 103
English, Spanish **θ** 103
English **z** 103
Italian, French, German **z** 104
Spanish **z** 105
English, Italian, French, German **s** 105
Spanish **s** 106
English, Italian, French **ʒ** 106
English, Italian, French, German, Spanish **ʃ** 107
French, Italian, Spanish **ɲ** 108
Italian **ʎ** 108
Spanish **ʎ** 109
English **j** 109
French, German, Spanish **j** 110
English **ç** 110
German **ç** 110
English **g** 111
Italian, French, German **g** 112
Spanish **g** 113
English **k** 113
Italian, French, German, Spanish **k** 114
English, Italian, German **ŋ** 115
Spanish **ŋ** 116
Spanish **g** 116
German, Spanish **x** 116

French **R** 116
English **b** 117
Italian, French, German, Spanish **b** 118
English, Italian, French **p** 118
German, Spanish **p** 119
English, French **m** 119
German, Spanish **m** 120
Spanish **ʋ** 120
French **ɥ** 120
English, Italian, French **w** 121
English **ɹ** 122
English **v** 122
Italian, French, German **v** 123
English, Italian, French **f** 123
German, Spanish **f** 124
German **ʔ** 124
English **h** 124
German **h** 125

Chapter XII

Vowels 126
High-Front Vowels 126
English **i** 126
Italian, French, German, Spanish **i** 127
French, German **y** 127
English **ɪ** 127
German **ɪ** 128
German **ʏ** 128
Mid-Front Vowels 128
English **e** 128
Italian, French, German, Spanish **e** 129
French, German **ø** 129
English, Italian, French, German, Spanish **ɛ** 130
French **ɛ̃** 130
French, German **œ** 131
French **œ̃** 131
Low-Front Vowel 132
English **æ** 132
English, French, Spanish **a** 132
High-Mixed Vowel 133
English **ɪ** 133

Mid-Mixed Vowel 133
English ə 133
French ə 134
German ə 135
Low-Mixed Vowel 135
English ɐ 135
High-Back Vowels 135
English u 135
Italian, French, German u 136
Spanish u 136
English, German ʊ 137
Mid-Back Vowels 137
English o 137
Italian, French, German, Spanish o 138
English ʌ 138
English, Italian, French, German ɔ 139
Spanish ɔ 140
Mid-Back Nasal Vowel 140
French ɔ̃ 140
Low-Back Vowels 140
English ɔ 140
English, Italian, French ɑ 141
German ɑ 142
English ɒ 142
Low-Back Nasal Vowel 142
French ɑ̃ 142

Chapter XIII

Phonetic Exercises in Diction 143
Respiration 144
Position 144
"Sensing" the Breathing Organs 144
Complete Respiration 144
Capacity, Control 145
Tests of Correct Breathing 146
Tongue-Tip 146
Practice in Trilling Tongue-Tip 147
Tongue-Tip and Teeth 147
Tongue-Tip with Front and Mixed Vowels 147
Tongue-Blade raised 147

Tongue-Blade retracted 147
Middle of Tongue and Top-of-Palate Consonants 148
Front Vowels 148
Front Vowels and Consonants 148
Lip-Rounding for Front Vowels 148
Bilabial Consonants 149
Labiodental Consonants 149
Low Vowels 150
Soft Palate 150
Back of Tongue and Soft Palate 151
Back Vowels 151
Vowels with Nasal Resonance 152
r-Drill 152
r preceded by Vowels 152
r followed by Vowels 153
r preceded and followed by Vowels 153
Exercises 33-35 154
Exercises 36-39 154
Exercises 40-43 155
Exercises 44-46 156
Consonant Sequences Exercise 47 157

Practice in Sound Sequences

Transition from Vowel to Vowel 157
Transition from Vowel to Consonant 157
Transition from Consonant to Vowel 158
Transition from Consonant to Consonant, Exercises 50-53 158
Transition from Consonant to Consonant, Exercises 54-55 159
Chapter XIV 160
Chants 160

Chapter XIV

Romeo and Juliet Act. III, Scene IV, Shakespeare
(First Four Lines)

English, Italian 160
French 161
German 161

INDEX

CHAPTER XV

Transcriptions 162

English:

How sweet the moonlight--Shakespeare 162
(Merchant of Venice)

Music, when soft voices die—Shelley 162
Rubaiyát of Omar Khayám 163
Hark, Hark! the Lark!—Shakespeare 164

Italian:

Voce di Donna—La Gioconda 165
Sebben Crudele—Canzonetta 165
Porgi Amor—Le Nozze di Figaro 166
Amarilli—Madrigal 166

French:

Psyché—Corneille 167
Dansons la Gigue—Verlaine 168

German:

Aus meinen grossen Schmerzen—Heine 169
Der Fichtenbaum—Heine 169

Bibliography 170

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